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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF FORESTS AND WATERS
DIVISION OF HYDROGRAPHY
HARRISBURG

STREAM FLOW RECORDS

1936

Elevations of Major Floods

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United States Geological Survey

FOR THE YEAR

October 1, 1935 to September 30, 1936



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STREAM FLOW RECORDS

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STREAM FLOW RECORDS
OF
PENNSYLVANIA
FOR THE YEAR
OCTOBER 1, 1935 TO SEPTEMBER 30, 1936

STREAM GAGING, FLOOD WARNING, AND
PRECIPITATION

This report contains records for the year ending September 30, 1936. All stream flow records previous to and including those for 1911, were published in one volume, Reports of the Water Supply Commission of Pennsylvania—1910 and 1911. For the years 1912 to 1921, they were published in the annual reports of the Water Supply Commission, with the records for 1917-18 and 1919-20 combined and issued in biennial form. Beginning with 1922, the records have been published by the Department of Forests and Waters, Division of Hydrography, in reports entitled "Stream Flow Records of Pennsylvania." They were published annually with the exception of those for the four years 1929-32, which were issued in one volume. Prior to 1913 they were compiled and published for calendar years. The 1914 records were tabulated for the nine months, January to September. Subsequent records have been published for the water years, October 1 to September 30.

Since June 1, 1931, the water resource investigations in Pennsylvania, including the collection of stream flow data, have been carried on under cooperative agreement with the Water Resources Branch of the United States Geological Survey.

STREAM GAGING

On October 1, 1935, the beginning of the 1936 water year, 98 stream gaging stations were in operation. Six stations were discontinued during the year, leaving 92 stations in operation at the end of this report period. The locations of the six discontinued stations and the dates when they went out of operation are as follows:

Stony Creek at Johnstown, March 31, 1936.
Chartiers Creek at Carnegie, September 30, 1936.
Kiskiminetas River at Vandergrift, September 30, 1936.
Upper Little Swatara Creek at Pine Grove, September 30, 1936.
White Clay Creek near Newark, Del., September 30, 1936.
Youghiogheny River at Sutersville, September 30, 1936.

Three of the discontinued stations were supplied with recorder equipment, thus leaving 53 stations in the State provided with wells, shelters, and water-stage recorders at the end of the 1936 water year.

This volume contains data for 105 stations, as shown by the tables and the map on pages 24-27. The records for the four stations on the Delaware River, two stations in the Potomac River Basin, and one station in the Monongahela River Basin were furnished by the New York, New Jersey, and Washington Offices of the United States Geological Survey. Descriptions of stations, tables of daily and monthly discharge, summary of run-off in second-feet per square mile, run-off depth in inches, precipitation, and per cent run-off to precipitation are given for 96 gaging stations having a satisfactory rating. Descriptions of stations and daily mean gage heights are published for four base stations operated in the Susquehanna River Basin for flood-warning purposes.

The Pine Grove station was discontinued on account of changing channel and backwater conditions. The results of the current-meter discharge measurements at this station are published in the table of miscellaneous discharge measurements on page 134.

The Newark station was discontinued as it had served the purpose for which it was established. The record was used in connection with the Delaware River Salinity Survey of the Pennsylvania Department of Health. This station record for the year ending September 30, 1936, is contained in this report.

The Sutersville station, which was not equipped with a waterstage recorder, was discontinued owing to the uncertain accuracy of the record due to regulation of the stream by water-power operations.

The station at Johnstown was discontinued on account of changes made in channel conditions by improvements and reconstruction that were made necessary by the 1936 flood. The record for this station is included in this report to March 31, 1936.

After several years efforts, it was found impossible to determine a rating for the Carnegie station that would justify the translation of gage heights into terms of discharge. The results of the currentmeter discharge measurements at this station are published in the table of miscellaneous discharge measurements on page 134.

The discharge for the Vandergrift station could not be accurately determined on account of the unknown quantities of water diverted past the gage. The station was discontinued in anticipation of establishing a new station at another site. There are no data for this station published in this report.

For stations where the maximum discharge has not been determined and published, a probable estimate can be furnished. Any other information that may be of importance to the engineer making application of these gaging-station records may also be obtained upon request to the Department of Forests and Waters, Division of Hydrography, Harrisburg, Pennsylvania.

The water year 1935-36 was characterized by a number of unusual climatic conditions that were strongly reflected in stream flow; however, as a whole, the extreme temperatures, precipitation, and stream flows adjusted themselves to approximately a normal year.

There were no unusual diversions from the ordinary climatic conditions in October and November. In general during the entire period from early in December until late in February, temperatures were exceptionally low and precipitation in the form of snow was unusually large. Ice on the streams attained more than normal thickness, except possibly on those reaches with swiftly running water or where chemical industrial wastes prevented its formation. There was also a heavy accumulation of snow and exceptional frost conditions where areas were not protected by snow cover.

During the two weeks February 25 to March 10 there was an average temperature of 36 degrees. The weekly averages at the individual first-order stations of the United States Weather Bureau in Pennsylvania ranged from 30 to 43 degrees. The melting of snow, the first since the middle of December, with very little additional precipitation except at a few scattered stations furnished enough run-off to break and move the ice on many streams; but as a rule there was not sufficient water to float and carry it over shallow sections, low islands, and other natural obstructions. There was an alternate breaking and lodging of the ice and the formation of ice gorges. These conditions were outstanding during the latter part of February and early in March, and at many localities the backwater from ice dams far exceeded flood stages.

Fortunately the continued melting of snow together with small amounts of rainfall furnished sufficient run-off, with the assistance of water impounded by ice dams, to float most of the ice out of the streams before the heavy rains of March 11 and 12 caused many of them to exceed flood stages. Before the streams had receded to normal conditions, additional precipitation, with outstanding amounts on March 16-18, resulted in the greatest floods known in the lower reaches of the Allegheny and Monongahela Rivers, the Ohio River at Pittsburgh, the West Branch of the Susquehanna River, and the Susquehanna River from the confluence of its North and West Branches at Sunbury to Chesapeake Bay. The Delaware River was at its highest stage in 33 years, and it would have attracted considerable attention if it had not been completely overshadowed by the extreme conditions in the central and western parts of the State.

A special report entitled "The Floods of March 1936 in Pennsylvania" containing basic hydrologic data pertinent to the floods was prepared and published late in September 1936. Copies of this report can be obtained upon request to the Department of Forests and Waters, Division of Hydrography, Harrisburg, Pennsylvania.

The stream flows were seriously affected by ice during the 1935-36 winter months, although the stream discharge did not recede to the

usual low flows during the ice periods. This may have been due to the heavy snow cover that prevented, to a large extent, an impervious strata of frozen ground surface. Ground water elevations were exceptionally high following the flood periods, but the streams receded rapidly. With the exception of August there were deficiencies in precipitation each month from April to September. During the months May to September the stream discharge was materially below the usual amount. As represented by drainage areas that totaled 39,927 square miles, the total discharge for the 5 months was only 46 per cent of the mean flow for the stations used during their entire term of record.

The flow in the principal drainage basins of the State for the year ending September 30, 1936, was 12.5 per cent above the mean flow for the 27 years 1910-36, as determined from the total discharge of the Delaware River at Riegelsville, Susquehanna River at Harrisburg, Allegheny River at Franklin, Kiskiminetas River at Avonmore, and Youghiogheny River at Connellsville, which drain a total area of 39,475 square miles or an area equivalent to 87.5 per cent of that of Pennsylvania.

In the Delaware River, the flow for the 1936 water year was 23.2 per cent above the mean flow for the 27 years 1910-36. The flow in the Susquehanna River was 14.6 per cent above the average flow for the 27 years, while the combined discharge of the Allegheny, Kiskiminetas and Youghiogheny Rivers was only one-half of one per cent above the mean for the same period.

Without exception, the high stages in the principal streams of Pennsylvania occurred in March. The low flows, irrespective of drainage basins or section of the State, were scattered through the months of October, July, August, and September.

FLOOD WARNING

The Flood Warning Service was continued in the Susquehanna Basin throughout the year. Except for the flood warnings during the great flood of March 1936, inaccurate and incomplete as they may have been, the additional loss of life and property in certain localities might have amounted to staggering figures.

Flood warnings had never been made for any such high stages in Pennsylvania. The loss of communication with gaging stations made it necessary to increase the predicted heights several times on a basis of miscellaneous fragmentary reports. At the present time the forecasts by the United States Weather Bureau and the Department of Forests and Waters constitute Pennsylvania's most effective agencies for flood protection.

PRECIPITATION

Thirty-eight precipitation stations are maintained by the Department of Forests and Waters, and records are received for 15 other stations operated by water companies. Prior to 1920 the Water Supply Commission of Pennsylvania published its precipitation records in their annual reports. Since that time, with the exception of stations that are located in close proximity to others, these records may be found in the monthly and annual reports of the United States Weather Bureau. Records for stations not published by the Weather Bureau are available at the office of the Department of Forests and Waters, Division of Hydrography, Harrisburg, Pennsylvania.

The average precipitation for the State during the year ending September 30, 1936, as deducted from the observations at 140 well-distributed stations, was 41.52 inches—a deficiency of 0.58 inch as compared with the average, which was computed from the 49 years record 1888 to 1936.

The yearly totals ranged from a minimum of 23.39 inches at Erie, Erie County, to a maximum of 57.80 inches at Hinckston Run, Cambria County. There were 8 months in the year with deficiencies in precipitation that ranged from 0.30 to 1.79 inches. During the remaining 4 months there were excesses in amounts that ranged from 0.73 to 3.30 inches.

The average precipitation for March was the greatest on record for that month in any year; however, it was not exceptional on the northwestern, west-central, and southeastern sections of the State. The monthly amounts ranged from 3.01 inches at Grove City, Mercer County, to 12.57 inches at the Mosquito Creek station near Williamsport, Lycoming County. A comparison of the monthly records with the average monthly amounts for the 49 years 1888 to 1936 is shown in the following table.

PRECIPITATION ON PENNSYLVANIA FOR THE YEAR ENDING
SEPT. 30, 1936

Month	Precipitation in inches		
	49-year Average	1935-36	Departure
October	3.16	2.77	-0.39
November	2.86	3.84	+ .98
December	3.11	2.62	- .49
January	3.22	4.21	+ .99
February	2.86	2.33	- .53
March	3.54	6.84	+3.30
April	3.39	3.01	- .38
May	3.88	2.09	-1.79
June	4.10	3.80	- .30
July	4.28	2.88	-1.40
August	4.23	4.96	+ .73
September	3.47	2.17	-1.30
The Year	42.10	41.52	- .58

The distribution of precipitation on Pennsylvania during the year ending September 30, 1936, is shown on the following map.

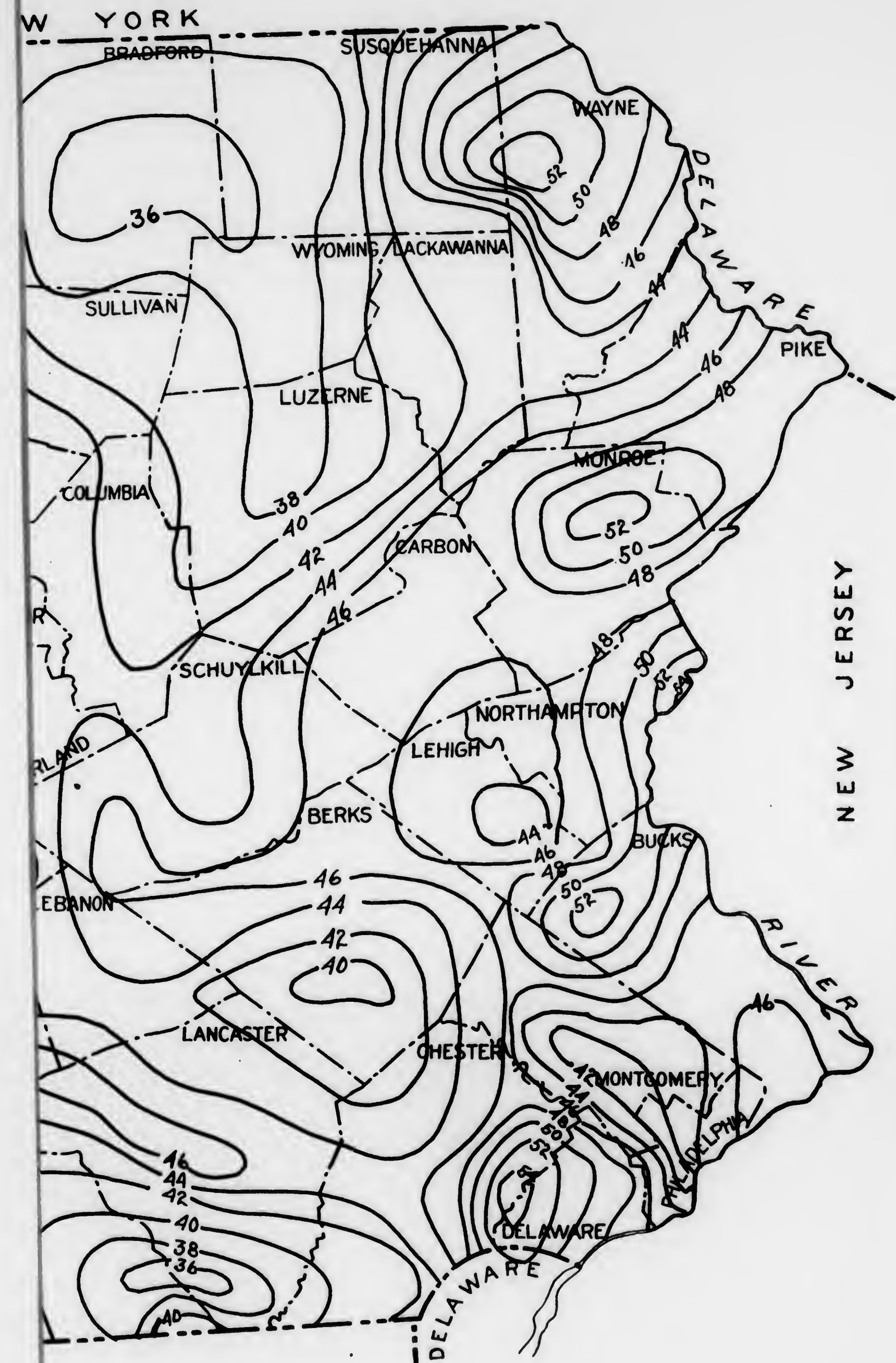
As deducted from the records of the 180 precipitation stations in Pennsylvania, used by the Division of Hydrography in determining the per cent run-off to precipitation at gaging stations, the average precipitation was about 46 inches on the Delaware River Basin, 41.5 inches on the Susquehanna River Basin, and 40 inches on the Ohio River Basin.

The monthly and yearly precipitation on Pennsylvania is shown in the following table.

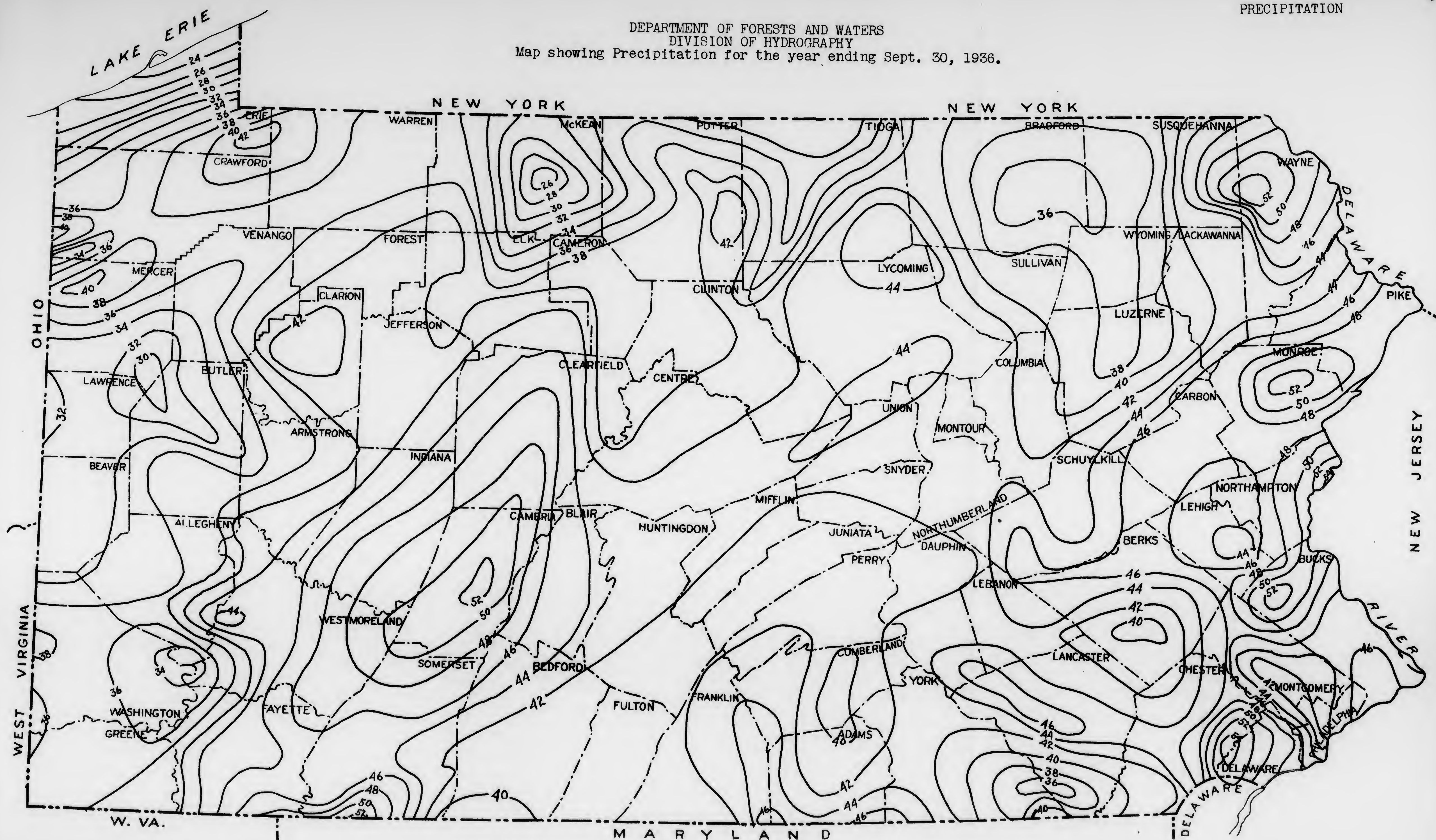
Precipitation on Pennsylvania for the 49 years ending Sept. 30, 1936.

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Total
1887-88	1.70	1.92	3.56	4.19	2.50	3.55	2.52	4.24	3.04	3.45	7.05	4.84	42.56
1888-89	4.02	3.37	3.14	3.54	1.96	2.90	4.50	5.91	5.43	6.80	3.24	5.05	49.86
1889-90	3.85	6.72	2.77	3.04	4.32	5.15	3.46	6.71	3.42	3.52	5.76	4.57	53.29
1890-91	5.87	1.49	3.97	3.64	4.61	5.10	2.08	2.12	4.50	6.32	5.09	2.39	47.18
1891-92	3.06	2.65	4.09	4.77	1.75	4.14	2.04	5.70	5.64	3.93	3.77	2.81	44.35
1892-93	.72	4.34	1.69	2.85	5.92	2.52	4.74	5.54	3.12	3.15	4.50	2.67	41.76
1893-94	3.26	2.93	3.06	2.29	3.53	1.63	3.62	8.88	2.57	2.32	1.84	6.30	42.23
1894-95	4.26	2.50	3.95	4.17	1.22	2.31	3.76	2.68	3.50	3.24	3.23	1.71	36.55
1895-96	1.99	2.48	3.22	1.43	4.90	4.51	1.75	2.85	4.64	6.80	2.22	4.82	41.70
1896-97	3.19	3.55	1.20	2.15	3.28	3.22	3.30	5.24	3.38	6.26	3.17	2.18	40.12
1897-98	1.32	5.28	3.95	4.25	2.23	4.31	2.93	5.11	2.79	3.36	6.60	1.70	43.83
1898-99	5.20	4.03	2.93	3.05	4.05	4.87	1.76	3.82	3.51	3.91	4.01	4.70	45.89
1899-00	1.55	2.66	3.04	2.64	4.22	3.61	1.57	2.79	3.60	4.86	3.33	1.77	35.64
1900-01	2.74	4.10	2.08	2.22	.96	4.14	5.41	5.56	3.47	3.88	6.81	3.39	44.76
1901-02	1.23	2.56	5.91	2.80	3.99	3.98	3.56	1.96	5.97	6.04	2.62	4.66	45.28
1902-03	4.64	1.53	5.54	3.31	4.49	4.52	3.53	1.67	6.53	5.36	5.29	2.09	48.50
1903-04	4.64	2.18	2.66	3.55	2.41	4.29	3.45	3.78	4.06	4.68	4.36	3.37	43.43
1904-05	2.87	1.14	2.48	3.70	1.70	3.86	2.84	2.59	4.39	4.87	5.71	3.41	39.56
1905-06	4.23	2.47	3.57	2.53	1.70	4.46	3.13	3.23	5.43	4.31	5.62	2.46	43.14
1906-07	4.46	1.48	3.97	4.36	1.91	4.26	2.64	3.08	4.99	3.84	2.94	6.37	44.30
1907-08	3.16	3.60	4.30	2.68	4.65	4.76	3.51	6.28	2.36	4.81	3.22	1.60	44.93
1908-09	1.95	.90	2.86	2.92	4.84	3.07	5.39	2.90	4.48	2.14	2.31	2.27	36.03
1909-10	2.27	1.40	3.39	5.55	3.50	.56	5.07	3.38	4.31	2.42	2.61	4.49	39.04
1910-11	1.91	2.45	2.65	3.54	2.27	2.57	3.79	1.97	4.71	2.81	7.63	5.29	41.50
1911-12	4.83	2.84	3.27	1.92	2.20	5.05	4.39	3.15	3.36	5.29	5.02	5.67	40.89
1912-13	2.74	2.17	3.27	4.95	1.84	5.27	3.82	3.86	2.26	4.16	2.69	3.28	40.31
1913-14	5.44	3.05	2.63	3.37	2.78	2.61	4.66	3.34	3.71	4.19	3.85	.99	40.62
1914-15	2.35	1.76	4.63	5.56	3.90	1.28	1.92	4.16	4.00	5.23	6.71	2.56	44.11
1915-16	2.65	2.18	4.06	2.42	3.08	4.12	3.65	3.19	6.14	4.45	2.57	3.77	42.28
1916-17	2.25	2.27	3.07	3.60	1.46	3.68	2.08	3.39	5.38	4.33	6.69	2.31	40.51
1917-18	6.38	.63	1.78	3.51	2.46	2.34	4.53	5.04	3.46	3.06	4.12	3.97	41.27
1918-19	3.17	2.03	3.38	2.53	2.23	3.57	2.70	5.80	3.90	5.90	5.43	2.07	42.71
1919-20	4.77	5.35	2.61	2.47	2.44	2.83	4.39	2.02	4.97	4.37	4.66	3.99	44.87
1920-21	1.67	3.54	3.28	2.58	2.59	3.33	3.11	3.93	3.12	4.13	3.83	4.68	39.79
1921-22	2.16	5.75	2.59	2.26	1.99	4.37	3.17	3.21	5.11	3.68	3.14	1.48	38.91
1922-23	2.51	1.21	2.75	4.26	2.16	2.49	2.94	3.50	2.73	4.24	3.10	3.55	35.44
1923-24	2.38	2.83	4.99	4.34	2.94	2.83	4.15	5.71	5.57	3.42	3.78	6.44	49.38
1924-25	.23	1.54	2.13	3.53	2.16	2.56	2.32	3.49	3.04	5.57	2.28	2.80	31.70
1925-26	4.83	3.56	1.72	2.80	4.06	1.91	2.03	1.78	3.63	3.82	5.69	5.81	41.64
1926-27	4.51	4.49	2.58	2.90	3.48	2.61	3.52	4.14	3.72	4.97	4.12	2.08	43.12
1927-28	6.40	4.95	4.41	2.08	3.42	3.24	5.50	2.23	7.96	5.44	4.60	2.33	52.56
1928-29	1.78	2.32	1.16	3.37	2.87	2.69	6.12	4.81	3.56	2.81	2.52	3.71	37.72
1929-30	5.59	3.39	2.77	2.25	2.69	3.03	2.71	3.03	4.20	2.23	1.47	2.45	35.81
1930-31	.99	1.48	2.29	1.46	1.98	2.96	3.33	5.28	3.71	5.28	4.01	3.15	35.92
1931-32	1.83	1.52	2.85	4.51	1.64	4.41	1.71	3.69	3.15	3.39	2.82	1.45	32.97
1932-33	5.31	4.75	2.19	2.00	5.33	4.49	5.86	2.58	4.26	4.26	7.61	4.66	51.34
1933-34	1.91	1.55	2.88	2.54	1.31	2.96	3.06	2.51	3.64	4.01	4.94	6.58	37.99
1934-35	1.46	3.61	2.55	3.08	2.67	2.62	2.56	3.00	4.22	5.63	3.91	3.51	38.82
1935-36	2.77	3.84	2.62	4.21	2.33	6.84	3.01	2.09	3.80	2.88	4.96	2.17	41.52
Mean	3.16	2.86	3.11	3.22	2.86	3.54	3.39	3.88	4.10	4.28	4.23	3.47	42.10

36.



DEPARTMENT OF FORESTS AND WATERS
DIVISION OF HYDROGRAPHY
Map showing Precipitation for the year ending Sept. 30, 1936.



STREAM FLOW RECORDS

DEFINITIONS OF TERMS

The volume of water flowing in a stream—the “run-off” or “discharge”—is expressed in various terms, each of which has become associated with a certain class of work. These terms may be divided into two groups—(1) those that represent a rate of flow, as second-feet, gallons per minute, and discharge in second-feet per square mile, and (2) those that represent the actual quantity of water, as run-off in inches, acre-feet and millions of cubic feet. The principal terms used in this series of reports are second-feet, second-feet per square mile, and run-off in inches. They may be defined as follows:

“Second-feet” is an abbreviation for “cubic feet per second.” A second-foot is the rate of discharge of water flowing in a channel of rectangular cross section 1 foot wide and 1 foot deep at an average velocity of 1 foot per second. It is generally used as a fundamental unit from which others are computed.

“Second-feet per square mile” is the average number of cubic feet of water flowing per second from each square mile of area drained, on the assumption that the run-off is distributed uniformly both as regards time and area.

“Run-off in inches” is the depth to which an area would be covered if all the water flowing from it in a given period were uniformly distributed on the surface. It is used for comparing run-off with rainfall, which is usually expressed in inches.

An “acre-foot” is equivalent to 43,560 cubic feet and is the quantity required to cover an acre to the depth of 1 foot. The term is commonly used in connection with storage and irrigation.

The following terms not in common use are here defined:

“Stage-discharge relation”—an abbreviation for the term “relation of gage height to discharge.”

“Control”—a term used to designate the natural section or stretch of the channel or artificial structure below the gage which determines the stage-discharge relation at the gage.

CONVERSION TABLES

The following tables afford a ready means of conversion between the terms in common use in hydraulic computations.

Discharge in second-feet per square mile into run-off in depth in inches

Discharge (second-feet per square mile)	Run-off (depth in inches)				
	1 day	28 days	29 days	30 days	31 days
1	0.03719	1.041	1.079	1.116	1.153
2	.07438	2.083	2.157	2.231	2.306
3	.11157	3.124	3.236	3.347	3.459
4	.14876	4.165	4.314	4.463	4.612
5	.18595	5.207	5.393	5.578	5.764
6	.22314	6.248	6.471	6.694	6.917
7	.26033	7.289	7.550	7.810	8.070
8	.29752	8.331	8.628	8.926	9.223
9	.33471	9.372	9.707	10.041	10.376

Note—For part of a month multiply the run-off for 1 day by the number of days.

Discharge in second-feet into run-off in acre-feet

Discharge (second-feet)	Run-off (acre-feet)				
	1 day	28 days	29 days	30 days	31 days
1	1.983	55.54	57.52	59.50	61.49
2	3.967	111.1	115.0	119.0	123.0
3	5.950	166.6	172.6	178.5	184.5
4	7.934	222.1	230.1	238.0	246.0
5	9.917	277.7	287.6	297.5	307.4
6	11.90	333.2	345.1	357.0	368.9
7	13.88	388.8	402.6	416.5	430.4
8	15.87	444.3	460.2	476.0	491.9
9	17.85	499.8	517.7	535.5	553.4

Note—For part of a month multiply the run-off for 1 day by the number of days.

Discharge in second-feet into run-off in millions of cubic feet

Discharge (second-feet)	Run-off (millions of cubic feet)				
	1 day	28 days	29 days	30 days	31 days
1	0.0864	2.419	2.506	2.592	2.678
2	.1728	4.838	5.012	5.184	5.356
3	.2592	7.257	7.518	7.776	8.034
4	.3456	9.676	10.02	10.37	10.71
5	.4320	12.10	12.53	12.96	13.39
6	.5184	14.51	15.04	15.55	16.07
7	.6048	16.93	17.54	18.14	18.75
8	.6912	19.35	20.05	20.74	21.42
9	.7776	21.77	22.55	23.33	24.10

Note—For part of a month multiply the run-off for 1 day by the number of days.

Discharge in second-feet into run-off in millions of gallons

Discharge (second-feet)	Run-off (millions of gallons)				
	1 day	28 days	29 days	30 days	31 days
1	0.0463	18.10	18.74	19.39	20.04
2	1.293	36.20	37.48	38.78	40.08
3	1.939	54.30	56.22	58.17	60.12
4	2.585	72.40	74.96	77.56	80.16
5	3.232	90.50	93.70	96.95	100.2
6	3.878	108.6	112.4	116.3	120.2
7	4.524	126.7	131.2	135.7	140.3
8	5.170	144.8	149.9	155.1	160.3
9	5.817	162.9	168.7	174.5	180.4

Note—For part of a month multiply the run-off for 1 day by the number of days.

Velocity in feet per second into velocity in miles per hour

(1 foot per second=0.681818 mile per hour, or very nearly two-thirds mile per hour; 1 mile per hour=1.46666 feet per second. In computing the table the values 0.68182 and 1.4667 were used).

Feet per second (units)	Miles per hour for tenths of foot per second									
	0	1	2	3	4	5	6	7	8	9
0	0.000	0.068	0.136	0.205	0.273	0.341	0.409	0.477	0.545	0.614
1	0.682	1.36	2.05	2.73	3.41	4.09	4.77	5.45	6.14	6.82
2	1.36	2.05	2.73	3.41	4.09	4.77	5.45	6.14	6.82	7.50
3	2.05	2.73	3.41	4.09	4.77	5.45	6.14	6.82	7.50	8.18
4	2.73	3.41	4.09	4.77	5.45	6.14	6.82	7.50	8.18	8.86
5	3.41	4.09	4.77	5.45	6.14	6.82	7.50	8.18	8.86	9.54
6	4.09	4.77	5.45	6.14	6.82	7.50	8.18	8.86	9.54	10.22
7	4.77	5.45	6.14	6.82	7.50	8.18	8.86	9.54	10.22	10.90
8	5.45	6.14	6.82	7.50	8.18	8.86	9.54	10.22	10.90	11.58
9	6.14	6.82	7.50	8.18	8.86	9.54	10.22	10.90	11.58	12.26

CONVENIENT EQUIVALENTS

LENGTH

1 inch=1/12 foot=0.027778 yard=0.000015783 mile=2.54 centimeters.
 1 foot=12 inches=1/3 yard=0.00016667 mile=0.3048 meter.
 1 yard=36 inches=3 feet=0.00056818 mile=0.9144 meter.
 1 mile=63,360 inches=5,280 feet=1,760 yards=1.60935 kilometers.
 1 meter=100 centimeters=0.001 kilometer=39.37 inches=3.2808 feet=1.0936 yards=0.00062137 mile.

SURFACE

1 square inch=0.000645 square foot=0.0007716 square yard=0.0000001594 acre=0.000000002491 square mile=6.45163 square centimeters.
 1 square foot=144 square inches=1/9 square yard=0.000022957 acre=0.00000003587 square mile=0.092903 square meter.
 1 square yard=1,296 square inches=9 square feet=0.0002066 acre=0.0000003228 square mile=0.83613 square meter.
 1 acre=6,272,640 square inches=43,560 square feet=4,840 square yards=0.0015625 square mile=208.71 feet square=0.404687 hectare.
 1 square mile=4,014,489,600 square inches=27,878,400 square feet=3,097,600 square yards=640 acres=259 hectares.
 1 square meter=10,000 square centimeters=0.0001 hectare=0.000001 square kilometer=1,550 square inches=10.7639 square feet=1.19598 square yards=0.0002471 acre=0.0000003861 square mile.

VOLUME

1 cubic inch=0.004329 United States gallon=0.0005787 cubic foot=16.3872 cubic centimeters.
 1 United States gallon=231 cubic inches=0.13368 cubic foot=0.00000307 acre foot=3.78543 liters.
 1 cubic foot=1,728 cubic inches=7.4805 United States gallons=0.037037 cubic yard=0.000022957 acre-foot=28.317 liters.
 1 cubic yard=46,656 cubic inches=27 cubic feet=0.00061963 acre-foot=0.76456 cubic meter.
 1 acre-foot=325,851 United States gallons=43,560 cubic feet=1,613.333 cubic yards=1,233.49 cubic meters.
 1 cubic meter, stere, or kiloliter=1,000,000 cubic centimeters=1,000 liters=61,023.4 cubic inches=264.17 United States gallons=35.3145 cubic feet=1.30794 cubic yards=0.000810708 acre-foot.

HYDRAULICS

1 United States gallon of water weighs 8.34 pounds avoirdupois.
 1 cubic foot of water weighs 62.5 pounds avoirdupois.
 1 second-foot=7.48 United States gallons per second=448.8 United States gallons per minute=26,929.9 United States gallons per hour=646,317 United States gallons per day.
 1 second-foot=60 cubic feet per minute=3,600 cubic feet per hour=86,400 cubic feet per day=31,536,000 cubic feet per year=0.000214 cubic mile per year.
 1 second-foot=0.9917 acre-inch per hour=1.983471 acre-feet per day=723.966942 acre-feet per year.
 1 second-foot=0.028317 cubic meter per second=1.699 cubic meters per minute=101.941 cubic meters per hour=2,446.58 cubic meters per day.
 1 second-foot for 1 year (365 days) will cover 1 square mile 1.1312 feet or 13.5744 inches deep.
 1 second-foot falling 10 feet=1.135 horsepower.
 100 United States gallons per minute=0.223 second-foot=0.442 acre-foot in one day.
 1 million gallons per day=1.55 second-feet=3.07 acre-feet per day=2.629 cubic meters per minute.
 1 million gallons per month=0.05525 second-feet for one 28-day month=0.05334 second-foot for one 29-day month=0.05157 second-foot for one 30-day month=0.04990 second-foot for one 31-day month.
 1,000,000,000 (1 United States billion) cubic feet=11,570 second-feet for one day=413 second-feet for one 28-day month=399 second-feet for one 29-day month=386 second-feet for one 30-day month=373 second-feet for one 31-day month.
 1 horsepower=1 second-foot falling 8.8 feet.
 1 horsepower=1 second-foot falling 11.0 feet, 80 percent efficiency.
 1 horsepower=5,694,120 foot-gallons per day=550 foot-pounds per second=33,000 foot-pounds per minute=1,980,000 foot-pounds per hour=2,545 British thermal units per hour=76 kilogrammeters per second=1.27 kilogrammeters per minute=746 watts.
 1.3405 horsepower=1 kilowatt.
 1 inch deep on 1 square mile=2,323,200 cubic feet=0.0737 second-foot for 1 year.
 1 foot deep (head of 1 foot)=0.434 pound pressure on 1 square inch.
 1 cubic meter per minute=0.5886 second-foot=4.403 United States gallons per second=1.1674 acre-feet per day.
 1 foot per second=0.68 mile per hour=1.097 kilometers per hour.
 Acceleration of gravity, g=32.16 feet per second.

EXPLANATION OF DATA

The data presented in this report cover the year beginning October 1, 1935, and ending September 30, 1936. At the beginning of January in most parts of the United States much of the precipitation in the preceding 3 months is stored in the form of snow or ice, or in ponds, lakes, and swamps, or as underground water, and this stored water passes off in the streams during the spring months. At the end of September, on the other hand, the only stored water available for run-off is possibly a small quantity in the ground; therefore, the run-off for the year beginning October 1 is practically all derived from precipitation within that year.

The base data collected at gaging stations consist of records of stage, measurements of discharge, and general information used to supplement the gage heights and discharge measurements in determining the daily flow. The records of stage are obtained either from direct readings on a staff or chain gage or from a water-stage recorder that gives a continuous record of the fluctuations. Measurements of discharge are made with a current meter by the general methods outlined in standard textbooks on the measurement of river discharge.

Rating tables giving the discharge for any stage are computed from the rating curves which are constructed from the discharge measurements. The application of the daily gage height to these rating tables gives the daily discharge from which the monthly and yearly mean discharge is computed.

The data presented for each gaging station covered by this report comprise a description of the station, a table showing the daily discharge of the stream, a table of monthly and yearly discharge and run-off, and a summary table of run-off in second-feet per square mile, run-off depth in inches, precipitation, and per cent run-off to precipitation. For stations with insufficient base data to determine the daily discharge, the results of current-meter discharge measurements are published in the table of miscellaneous discharge measurements.

The description of the station gives, in addition to statements regarding location and type of gage, information as to diversions that decrease the flow at the gage, artificial regulation, maximum and minimum recorded discharges, accuracy of the records, and average discharge for the stations that have a record for ten or more years. The maximum discharge given under "Extremes" represents the crest discharge determined from records of stage by water-stage recorders, or in case of non-recording gages it is determined from flood marks or from graphs based on gage readings made once daily or more frequently.

The table of daily discharge gives, in general, the discharge in second-feet corresponding to the daily gage height, which may be the mean of two or more readings daily in the case of a nonrecording gage, or the mean daily gage height obtained from a water-stage recorder graph.

At stations on streams subject to sudden or rapid diurnal fluctuation, the discharge obtained from the rating table and the mean daily gage height may not be the true mean discharge for the day. If such stations are equipped with water-stage recorders, the mean daily discharge may be obtained by averaging discharge at regular intervals during the day or by using an instrument known as the discharge integrator, which has a setting to correspond with the rating curve of a station and determines the mean daily discharge from a continuous gage-height graph.

In the table of monthly discharge, the column headed "Maximum" gives the maximum daily discharge and not the discharge when the water surface was at crest height. Likewise, in the column headed "Minimum," the quantity given is the minimum daily discharge. The column headed "Mean" is the average flow in cubic feet per second during the month. On this average flow are based computations recorded in the remaining columns, which are defined on page 18.

ACCURACY OF FIELD DATA AND COMPUTED RECORDS

The accuracy of stream-flow data depends primarily (1) on the permanency of the stage-discharge relation and (2) on the accuracy of observation of stage, measurements of flow, and interpretation of records.

The station description gives a statement in regard to the general accuracy of the records. "Excellent" indicates that records are accurate within 5 per cent; "good," within 10 per cent; "fair," within 15 per cent; and "poor," within 20 per cent or more.

The monthly means for any station may represent with high accuracy the quantity of water flowing past the gage, but the figures showing discharge per square mile and run-off in inches may be subject to gross errors caused by the inclusion of large noncontributing districts in the measured drainage area.

The table of monthly discharge gives a general idea of the flow at the station. The table of daily discharge allows more detailed studies of the variation in flow. It should be borne in mind, however, that the observations in each succeeding year may be expected to throw new light on data previously published.

COOPERATION

Acknowledgment is due the following agencies for equipment and assistance in the collection of records.

- American Sheet and Tin Plate Co., Vandergrift, Pa., (Vandergrift).
- Bethlehem Steel Co., Johnstown, Pa., (Johnstown).
- City of Lancaster, (Lancaster).
- City of New Castle, (New Castle).
- City of Philadelphia, (Philadelphia).
- City of Wilmington, Del., (Chadds Ford).
- Clarion River Power Co., Johnstown, Pa., (Piney).
- Glatfelter Paper Co., Spring Grove, Pa., (Spring Grove).
- Panther Valley Water Co., Lansford, Pa., (Tamaqua).
- Penn Central Power Co., Altoona, Pa., (Saxton).
- Pennsylvania Power and Light Co., Allentown, Pa., (Wilsonville).
- Philadelphia Electric Co., Philadelphia, Pa., (Castle Fin, Harrisburg, Lancaster, and Manchester).
- Robert O. Hayt, Consulting Engineer, Corning, N. Y., (Loyalsock).
- Safe Harbor Water Power Corp., Baltimore, Md., (Marietta).
- Philadelphia Suburban Water Co., Bryn Mawr, Pa., (Langhorne and Woodlyn).
- United States Engineer Office, Baltimore, Md., (Dalmatia, Gapsville, Huntingdon, Marklesburg, Millerstown, Penns Creek, Shermandale, and Wapwallopen).
- United States Engineer Office, Philadelphia, Pa., (Bethlehem and Tannery).
- United States Engineer Office, Pittsburgh, Pa., (Charleroi, Franklin, Larabee, Parkers Landing, Sugar Creek, Sutersville, Utica, and Wampum).
- United States Geological Survey, Albany, N. Y., (Port Jervis).

United States Geological Survey, Trenton, N. J., (Belvidere, Riegelsville, and Trenton).

United States Geological Survey, Washington, D. C., (Bedford Valley, Salisbury, and Sylvan).

United States Weather Bureau, Harrisburg, Pa., (Corning, Newport, and Sunbury).

West Penn Power Co., Pittsburgh, Pa., (Connellsville).

York Water Co., York, Pa., (York).

The Commonwealth of Pennsylvania is divided into six drainage basins: Delaware, Susquehanna, Potomac, Genesee, Erie, and Ohio. The hydrographic data in the following pages are divided into four groups corresponding to the basins in which the stations are located. There are no gaging stations in the Erie or Genesee Basins. The stations in each basin are shown in the following tables and their locations are indicated on the stream gaging map with reference numbers corresponding to those given in the tables.

GAGING STATIONS IN DELAWARE RIVER BASINS*

Station No.	Stream	Location
1	Delaware River	Port Jervis, N. Y.
2	Delaware River	Belvidere, N. J.
3	Delaware River	Riegelsville, N. J.
4	Delaware River	Trenton, N. J.
5	Lackawaxen River	West Hawley
6	Wallenpaupack Creek	Wilsonville
7	Bushkill Creek	Shoemakers
8	McMichaels Creek	Stroudsburg
9	Lehigh River	Tannery
10	Lehigh River	Bethlehem
11	Tohickon Creek	Pipersville
12	Neshaminy Creek	Langhorne
13	Schuylkill River	Pottstown
14	Schuylkill River	Philadelphia
15	Little Schuylkill River	Tamaqua
16	Perkiomen Creek	Graters Ford
17	Crum Creek	Woodlyn
18	Ridley Creek	Moylan
19	Chester Creek	Chester
20	White Clay Creek	Newark, Del.
21	Brandywine Creek	Chadds Ford

* For information available on each station, see description of station.

GAGING STATIONS IN SUSQUEHANNA RIVER BASIN*

Station No.	Stream	Location
1	North Branch of Susquehanna River	Binghamton, N. Y.
2	North Branch of Susquehanna River	Towanda
3	North Branch of Susquehanna River	Wilkes-Barre
4	North Branch of Susquehanna River	Danville
5	Susquehanna River	Sunbury
6	Susquehanna River	Harrisburg
7	Susquehanna River	Marietta
8	Chemung River	Corning, N. Y.
9	Towanda Creek	Monroeton
10	Tunkhannock Creek	Dixon
11	Wapwallopen Creek	Wapwallopen
12	West Branch of Susquehanna River	Bower
13	West Branch of Susquehanna River	Renovo
14	West Branch of Susquehanna River	Lock Haven
15	West Branch of Susquehanna River	Williamsport
16	Clearfield Creek	Dimeling
17	Driftwood Branch of Sinnemahoning Creek	Sterling Run
18	North Bald Eagle Creek	Beech Creek Station
19	Pine Creek	Cedar Run
20	Lycoming Creek	Trout Run
21	Loyalsock Creek	Loyalsock
22	Penn Creek	Penns Creek
23	Mahantango Creek East	Dalmatia
24	Frankstown Branch of Juniata River	Williamsburg
25	Juniata River	Newport
26	Shaver Creek	Petersburg
27	Standing Stone Creek	Huntingdon
28	Raystown Branch of Juniata River	Saxton
29	Dunning Creek	Yount
30	Brush Creek	Gapsville
31	Great Trough Creek	Marklesburg
32	Aughwick Creek	Orbisonia
33	Tuscarora Creek	Port Royal
34	Cocolamus Creek	Millerstown
35	Sherman Creek	Shermandale
36	Conodoguinet Creek	Hogestown
37	Swatara Creek	Harper Tavern
38	Upper Little Swatara Creek	Pine Grove
39	West Conewago Creek	Manchester
40	Codorus Creek	Spring Grove
41	South Branch of Codorus Creek	York
42	Conestoga Creek	Lancaster
43	Muddy Creek	Castle Fin

GAGING STATIONS IN POTOMAC RIVER BASIN*

Station No.	Stream	Location
1	Evitts Creek	Bedford Valley
2	Licking Creek	Sylvan

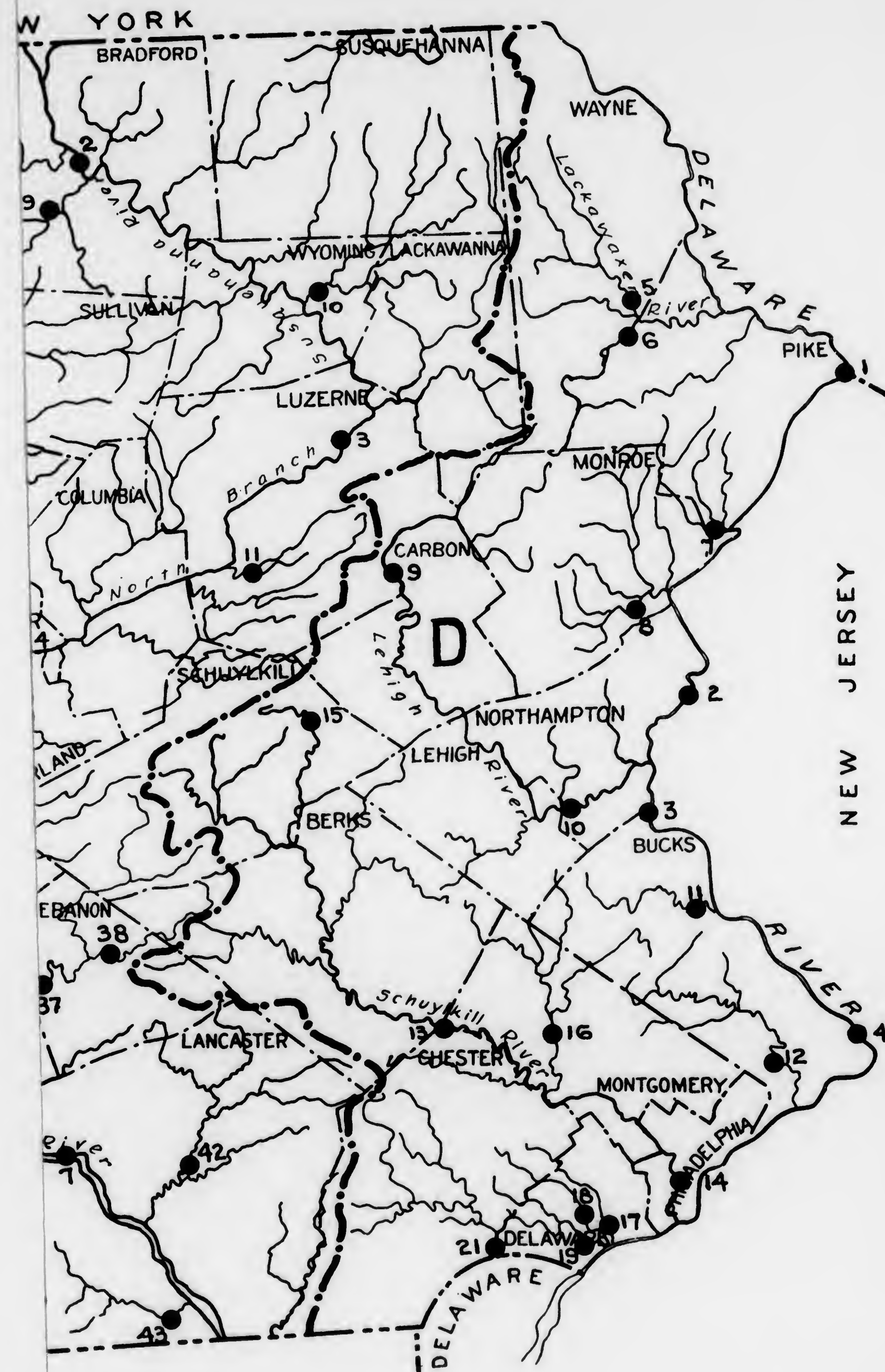
* For information available on each station, see description of station.

GAGING STATIONS IN OHIO RIVER BASIN*

Station No.	Stream	Location
1	Allegheny River	Larabee
2	Allegheny River	Franklin
3	Allegheny River	Parkers Landing
4	Ohio River	Sewickley
5	Brokenstraw Creek	Youngsville
6	Tionesta Creek	Nebraska
7	Oil Creek	Rouseville
8	French Creek	Carters Corners
9	French Creek	Saegertown
10	French Creek	Utica
11	Cussewago Creek	Meadville
12	Sugar Creek	Sugarcreek
13	Clarion River	Piney
14	Redbank Creek	St. Charles
15	Mahoning Creek	Dayton
16	Crooked Creek	Ford City
17	Stony Creek	Johnstown
18	Kiskiminetas River	Avonmore
19	Kiskiminetas River	Vandergrift
20	Blacklick Creek	Blacklick
21	Loyalhanna Creek	New Alexandria
22	Monongahela River	Charleroi
23	South Fork of Tenmile Creek	Jefferson
24	Youghiogheny River	Connellsville
25	Youghiogheny River	Sutersville
26	Casselman River	Markleton
27	Big Piney Run	Salisbury
28	Laurel Hill Creek	Ursina
29	Turtle Creek	Trafford
30	Chartiers Creek	Carnegie
31	Beaver River	Wampum
32	Pymatuning Reservoir	Pymatuning Dam
33	Shenango River	Pymatuning Dam
34	Shenango River	Sharon
35	Sugar Run	Pymatuning Dam
36	Little Shenango River	Greenville
37	Pymatuning Creek	Orangeville
38	Connoquenessing Creek	Hazen
39	Slippery Rock Creek	Wurtemburg

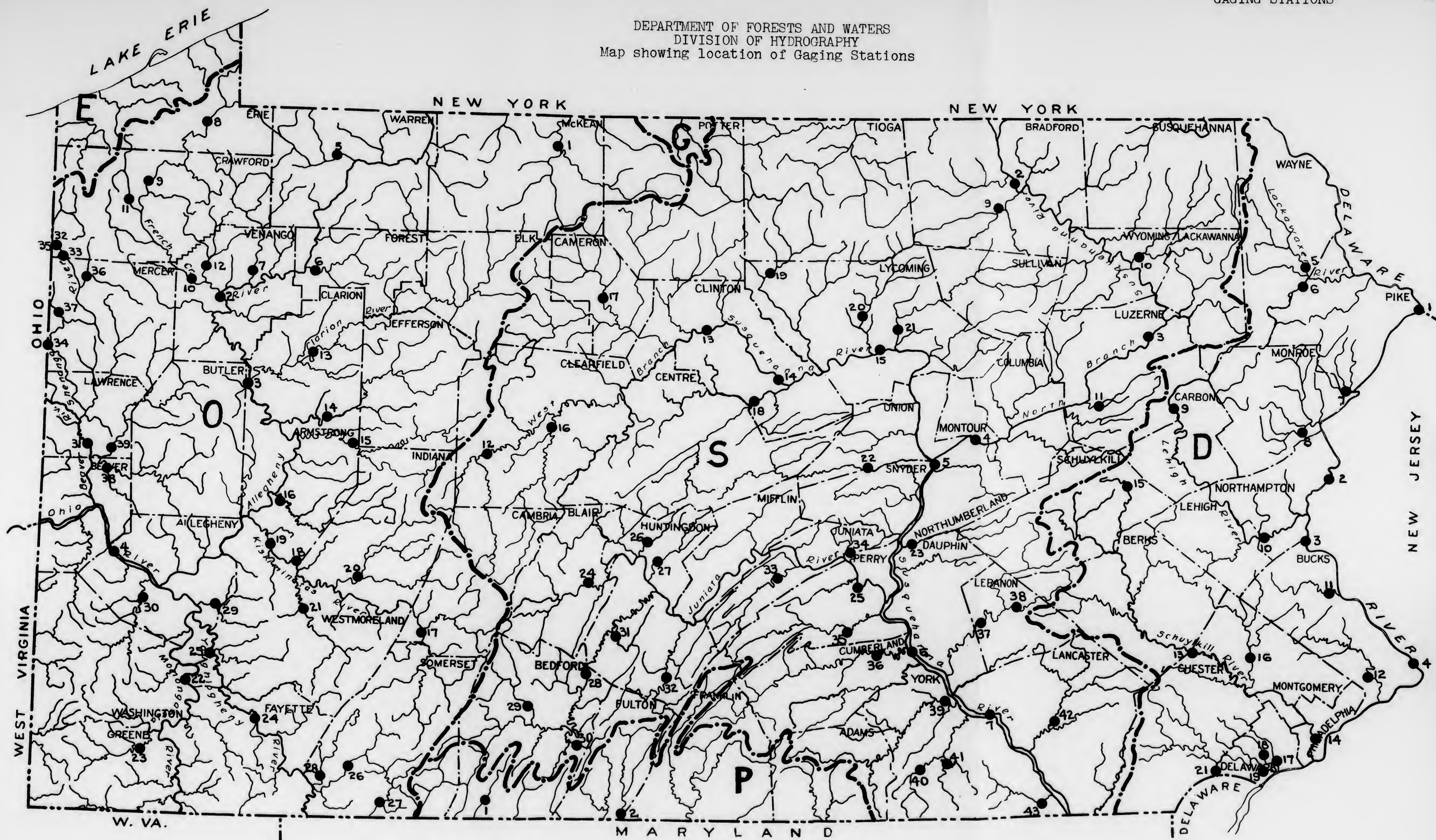
* For information available on each station, see description of station.

GAGING STATIONS



E, Erie; O, Ohio.

DEPARTMENT OF FORESTS AND WATERS
DIVISION OF HYDROGRAPHY
Map showing location of Gaging Stations



Legend to Drainage Basins.- D, Delaware; S, Susquehanna; P, Potomac; G, Genesee; E, Erie; O, Ohio.

GAGING-STATION RECORDS

DELAWARE RIVER BASIN

Delaware River at Port Jervis, N. Y.

Location.— Water-stage recorder, lat. 41°22'20", long. 74°41'50", near highway bridge at Port Jervis, Orange County, 1½ miles above mouth of Neversink River. Zero of gage is 415.35 feet above mean sea level (1912 adjustment).

Drainage area.— 3,076 square miles.

Records available.— October 1904 to September 1936.

Average discharge.— 32 years, 5,525 second-feet.

Extremes.— Maximum discharge during year, 108,000 second-feet Mar. 18 (gage height, 17.55 feet) from rating curve extended above 35,000 second-feet; minimum, about 320 second-feet Aug. 3 (gage height, about 0.94 foot); minimum daily discharge, 538 second-feet Sept. 27.

1904-36: Maximum discharge, that of Mar. 18, 1936; minimum, 175 second-feet Sept. 22, 23, 1908 (gage height, 0.60 foot); minimum daily discharge, 175 second-feet Sept. 22, 23, 1908.

Maximum stage known, 25.5 feet Mar. 8, 1904 (ice jam); maximum discharge known, 155,000 second-feet Oct. 10, 11, 1903, from rating curve extended above 35,000 second-feet.

Remarks.— Records excellent except those for Oct. 26-29, which are good and were computed from records for stations at Hale Eddy and Fishs Eddy, and those for periods of ice effect, Dec. 20, 21, Dec. 24 to Jan. 2, Jan. 23 to Mar. 12, which are fair and were computed on basis of one discharge measurement, gage heights, and weather records. Regulation from operation of power plants and from storage in Lake Wallenpaupack and in Toronto and Swinging Bridge Reservoirs; combined storage capacity 12,200,000,000 cubic feet. Records of storage in Lake Wallenpaupack furnished by Pennsylvania Power & Light Co., those for Toronto and Swinging Bridge Reservoirs furnished by Chas. H. Tenney & Co.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,600	24,300	15,800	2,400	2,800	4,600	12,800	5,250	2,000	1,830	1,440	2,580
2	1,520	10,600	12,000	2,600	2,600	4,400	11,800	4,820	2,490	1,440	665	1,830
3	1,740	6,900	9,800	4,000	2,400	4,800	12,800	4,440	2,540	1,880	661	1,530
4	1,640	5,300	8,100	5,400	2,400	4,400	11,600	4,760	2,580	1,420	1,610	1,380
5	1,560	4,450	6,600	7,700	2,600	4,600	9,100	4,760	2,430	1,100	1,530	1,160
6	940	3,800	5,600	7,100	2,600	5,000	12,200	4,440	2,250	1,130	1,370	1,010
7	1,040	6,000	4,850	5,600	2,400	5,000	24,400	4,140	1,650	1,770	1,650	1,010
8	1,600	5,300	4,400	5,300	2,400	5,000	19,700	4,000	1,400	1,380	1,480	1,010
9	1,380	5,700	5,200	5,300	2,200	4,800	16,300	3,890	2,160	1,720	1,010	1,800
10	1,180	4,950	6,300	4,450	2,000	5,500	14,800	3,920	2,130	1,850	1,070	1,880
11	980	4,150	7,000	4,550	2,200	15,000	15,600	3,540	2,150	1,700	1,600	1,890
12	660	4,650	5,900	4,400	2,400	72,700	15,400	3,550	2,160	1,400	1,710	1,810
13	740	5,800	5,100	4,350	2,200	59,500	17,300	3,540	1,960	1,190	1,560	948
14	680	39,200	4,950	4,550	2,200	34,200	21,700	4,400	1,460	1,670	1,810	873
15	1,580	24,500	5,000	4,650	2,400	23,800	19,200	4,090	1,850	1,670	1,820	1,440
16	1,420	14,500	6,700	5,400	2,200	25,400	17,700	3,750	1,950	1,630	899	1,310
17	1,100	10,800	7,200	6,600	2,200	48,300	15,000	3,300	1,760	1,500	912	1,170
18	940	9,600	6,200	6,300	2,400	93,100	13,000	3,020	1,880	1,210	991	1,010
19	1,020	8,800	5,300	4,350	2,600	82,800	11,000	3,250	7,380	606	900	1,570
20	630	8,200	4,800	3,500	2,400	57,700	9,800	3,300	7,140	671	1,330	840
21	660	11,400	4,200	3,800	2,400	42,400	8,800	3,240	4,860	1,550	1,470	778
22	1,140	11,000	3,650	4,250	2,200	44,300	9,300	3,170	3,910	1,570	1,100	1,420
23	1,540	9,400	3,100	4,000	1,200	31,400	9,100	2,930	3,010	1,680	1,910	1,060
24	1,220	7,600	3,400	4,000	1,400	23,800	7,700	2,520	2,530	1,800	3,600	1,050
25	980	6,300	3,000	3,800	2,400	19,900	6,880	2,600	2,330	1,480	3,540	1,000
26	850	6,000	2,600	2,800	2,600	17,300	6,120	2,750	2,210	973	2,490	748
27	750	5,600	3,000	2,800	3,200	15,800	5,940	2,740	1,980	843	1,850	538
28	700	6,000	3,400	3,400	4,600	21,600	5,760	2,610	2,020	1,490	1,560	692
29	600	20,700	2,800	3,400	5,000	19,600	5,250	2,590	1,610	1,650	1,430	956
30	1,140	24,400	2,400	2,800	2,200	16,000	5,080	2,400	1,850	1,570	1,560	1,600
31	19,200	2,600	2,800	2,800	14,000		2,070			1,530	2,630	

Month	Observed			Storage (Mean)	Observed		
	Maximum	Minimum	Mean		Mean	Per square mile	Run-off in inches
October.....	19,200	600	1,701	- 423			
November.....	39,200	3,800	10,530	+ 627			
December.....	15,800	2,400	5,515	+ 115			
January.....	7,700	2,400	4,398	- 178			
February.....	5,000	1,200	2,503	- 314			
March.....	93,100	4,400	26,670	+ 2,355			
April.....	24,400	5,080	12,370	- 307			
May.....	5,250	2,070	3,541	- 212			
June.....	7,380	1,400	2,588	- 402			
July.....	1,880	606	1,448	- 885			
August.....	3,600	661	1,579	- 455			
September.....	2,580	538	1,263	- 402			
The year.....	93,100	538	6,190	- 38		2.01	27.39

DELAWARE RIVER BASIN

Delaware River at Belvidere, N. J.

Location.— Water-stage recorder, lat. 40°49'36"; long. 75°5'2", at Belvidere, Warren County, just below mouth of Pequest River. Zero of gage is 227.18 feet above mean sea level.

Drainage area.— 4,542 square miles.

Records available.— October 1922 to September 1936.

Average discharge.— 14 years, 7,855 second-feet, corrected for storage.

Extremes.— Maximum discharge during year, 179,000 second-feet Mar. 19 (gage height, 25.0 feet); minimum, 895 second-feet Oct. 29 (gage height, 2.45 feet).

1922-36: Maximum discharge, that of Mar. 19, 1936; minimum, 838 second-feet Sept. 28, 1932 (gage height, 2.37 feet).

Maximum stage known, 28.6 feet, from authentic high-water mark, Oct. 10, 1903 (discharge, 220,000 second-feet).

Remarks.— Records excellent except those for periods of ice effect, Dec. 28 to Jan. 1, Jan. 30 to Feb. 3, Feb. 5-13, 19-23, and for period of missing gage heights, Jan. 20-29, which are fair and were computed on basis of gage heights, weather records, and records at Riegelsville. Part of table of monthly discharge corrected for effect of storage in Lake Wallenpaupack and in Toronto and Swinging Bridge Reservoirs.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,480	37,900	27,800	3,600	5,000	7,030	17,600	7,730	3,040	3,140	1,850	3,360
2	2,200	19,600	20,600	3,700	4,700	6,860	16,100	7,910	3,250	3,040	1,740	3,140
3	2,120	13,700	17,100	7,640	4,700	6,860	16,600	7,030	3,470	2,630	1,160	2,340
4	2,210	10,200	14,100	11,200	4,580	7,200	16,600	6,860	3,700	2,830	1,010	2,040
5	2,160	8,640	11,500	11,500	4,600	7,380	13,700	7,730	3,700	2,440	1,720	1,850
6	2,070	7,200	10,200	11,500	4,450	7,550	19,100	7,200	3,360	2,040	1,820	1,590
7	1,590	7,030	8,460	10,000	4,200	7,550	36,600	6,530	2,940	2,020	1,710	1,450
8	1,460	8,460	7,910	9,020	4,000	7,550	32,400	6,060	2,340	2,540	1,850	1,440
9	2,050	7,550	8,090	9,020	4,200	7,380	25,400	5,900	2,160	2,160	1,760	1,480
10	1,870	7,550	9,020	10,600	4,100	8,460	23,000	6,060	2,940	2,440	1,330	2,070
11	1,700	6,530	10,000	8,830	3,700	16,400	22,400	5,590	2,830	2,630	1,490	2,250
12	1,440	6,210	9,600	8,460	3,700	114,000	22,400	5,440	3,140	2,440	2,020	2,210
13	1,250	7,910	8,270	8,090	3,900	123,000	21,800	5,140	3,580	2,050	2,050	2,110
14	1,170	27,400	7,730	8,090	4,060	64,200	26,600	6,060	3,700	1,760	1,920	1,450
15	1,160	35,500	7,380	7,730	4,060	41,000	26,000	7,200	3,250	2,340	2,140	1,180
16	1,790	20,600	8,830	11,000	4,190	35,900	23,600	6,060	3,700	2,200	2,070	1,740
17	1,800	15,600	10,200	11,000	4,060	53,500	21,200	5,290	3,360	2,160	1,380	1,720
18	1,530	14,100	9,410	10,600	3,820	126,000	18,100	4,720	4,060	2,020	1,300	1,550
19	1,350	13,200	8,270	9,410	3,600	166,000	15,600	5,000	7,250	1,770	1,320	1,320
20	1,400	12,300	7,550	5,400	3,500	111,000	13,700	6,060	12,300	1,250	1,190	1,870
21	1,170	14,100	6,860	6,000	3,500	68,200	12,800	5,590	11,000	1,080	1,520	1,280
22	1,060	16,600	5,900	6,600	3,500	67,200	11,900	5,140	8,460	1,870	1,760	1,140
23	1,460	14,600	4,720	6,000	3,500	49,000	12,800	4,720	6,860	1,970	1,490	1,710
24	1,640	12,800	4,450	5,000	3,250	34,500	11,000	4,190	5,440	2,250	3,470	1,400
25	1,580	10,600	4,720	5,800	3,140	28,400	9,600	3,820	4,720	2,440	5,140	1,370
26	1,370	9,800	4,450	6,200	4,060	24,200	8,640	4,190	4,190	1,950	4,060	1,320
27	1,200	9,410	3,820	5,600	5,290	22,400	8,090	4,060	3,940	1,460	3,140	1,120
28	1,030	9,600	3,800	5,000	6,700	27,800	7,910	4,190	3,700	1,260	2,440	1,010
29	962	25,800	3,400	6,000	7,200	29,000	7,550	3,940	3,360	1,940	2,250	986
30	3,070	38,900	3,400	5,800		23,000	7,030	3,700	3,040	1,950	2,250	1,260
31	23,900		3,500	5,400		19,600		3,470		1,880	2,730	
Month	Observed			Corrected for storage								
	Maximum	Minimum	Mean	Mean	Per square mile	Run-off in inches						
October	23,900	962	2,339	1,916	0.442	0.49						
November	38,900	6,210	14,980	15,610	3.44	3.84						
December	27,800	3,400	8,743	8,858	1.95	2.25						
January	11,500	3,600	7,735	7,557	1.66	1.91						
February	7,200	3,140	4,250	3,938	.867	.94						
March	166,000	6,860	42,520	44,880	9.88	11.39						
April	36,600	7,030	17,530	17,220	3.79	4.23						
May	7,910	3,470	5,567	5,355	1.18	1.36						
June	12,300	2,160	4,426	4,024	.886	.99						
July	3,140	1,080	2,124	1,240	.273	.31						
August	5,140	1,010	2,035	1,580	.348	.40						
September	3,360	986	1,692	1,290	.284	.32						
The year	166,000	962	9,522	9,484	2.09	28.43						

DELAWARE RIVER BASIN

Delaware River at Riegelsville, N. J.

Location.— Water-stage recorder, lat. 40°35'36", long. 75°11'17", at suspension bridge at Riegelsville, Warren County, 600 feet above mouth of Musconetcong River, flow of which is included in records subsequent to Oct. 1, 1931. Zero of gage is 125.29 feet above mean sea level.

Drainage area.— 6,344 square miles (includes drainage area of Musconetcong River).

Records available.— July 1906 to September 1936.

Average discharge.— 30 years, 10,860 second-feet (including flow of Musconetcong River subsequent to Oct. 1, 1931), corrected for diversion and storage.

Extremes.— Maximum discharge during year, 210,000 second-feet Mar. 19 (gage height, 32.45 feet) determined by slope-area method; minimum, not including flow in Delaware Division Canal, 1,660 second-feet Aug. 5, Sept. 29, 30 (gage height, 2.10 feet).

1906-36: Maximum discharge, that of Mar. 19, 1936; minimum, not including flow in canal, 870 second-feet Sept. 20, 1908 (gage height, 1.55 feet).

Maximum stage known, 35.9 feet, from authentic high-water marks, Oct. 10, 1903 (discharge, about 275,000 second-feet).

Remarks.— Records good below and fair above 30,000 second-feet. Discharge for period intake was partly plugged, July 14 to Aug. 3, computed on basis of recorder charts, observer's weekly readings, and records at Trenton. Part of table of monthly discharge corrected for diversion in Delaware Division Canal, and for effect of storage on Wallenpaupack Creek, in Swinging Bridge and Toronto Reservoirs on Mongaup River, and in Lake Hopatcong.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,440	44,500	38,900	6,080	7,490	12,700	25,000	10,500	5,010	4,710	2,600	4,010
2	2,940	28,000	29,500	6,280	7,010	12,000	23,500	10,900	4,710	4,710	2,520	4,010
3	2,940	17,500	24,500	16,500	7,010	11,200	23,000	9,840	5,310	4,010	2,130	3,390
4	3,160	13,100	20,200	21,100	6,700	11,600	22,600	10,200	5,460	3,880	1,800	2,940
5	3,160	11,200	16,300	18,000	6,850	12,700	19,700	10,500	5,460	4,010	2,090	2,730
6	3,050	9,500	14,600	17,100	6,700	12,700	30,400	9,840	5,010	3,390	2,530	2,440
7	2,730	8,480	12,400	14,600	6,380	12,400	51,200	9,160	4,710	3,160	2,530	2,300
8	2,340	10,200	11,600	13,100	5,920	12,000	46,900	8,480	3,880	3,510	2,530	2,160
9	2,840	9,500	11,600	13,900	6,230	12,400	37,300	8,150	3,630	3,390	2,530	2,210
10	2,940	9,500	12,700	20,700	6,080	15,800	33,600	8,150	4,280	3,390	2,180	2,530
11	2,730	8,480	13,500	15,400	5,460	34,500	32,600	8,150	4,420	3,760	2,200	3,050
12	2,340	7,660	13,500	13,900	5,460	143,000	32,000	7,490	5,160	3,880	2,730	2,840
13	2,320	9,500	11,600	13,100	6,080	163,000	31,000	7,490	6,230	3,630	2,940	2,840
14	2,020	24,100	10,900	13,100	5,920	91,600	34,100	8,150	6,230	2,900	2,840	2,440
15	2,090	41,700	10,900	12,700	6,080	57,600	34,700	9,500	5,310	3,260	3,050	1,900
16	2,320	26,500	12,400	19,300	6,230	49,400	31,500	8,480	5,610	3,200	3,160	2,160
17	2,730	21,100	13,900	17,500	6,230	64,800	28,500	7,660	5,010	3,140	2,530	2,530
18	2,530	23,500	13,500	16,300	6,080	155,000	25,000	7,010	6,540	3,000	2,200	2,320
19	2,200	20,700	12,000	14,300	5,760	204,000	21,600	6,850	10,200	2,800	2,110	2,160
20	2,160	18,800	10,900	8,820	5,610	148,000	18,800	8,480	14,600	2,520	1,990	2,440
21	2,160	20,200	9,840	9,840	5,610	92,600	17,500	8,150	13,500	2,440	2,160	2,230
22	1,940	23,000	8,150	10,500	5,610	84,100	16,700	7,490	11,200	2,480	2,530	1,920
23	2,080	20,700	7,820	9,840	5,460	66,600	16,700	6,850	9,160	2,750	2,200	2,200
24	2,730	18,000	6,850	8,150	5,160	49,400	15,400	6,380	7,490	3,050	5,590	2,210
25	2,440	15,000	6,700	9,160	5,010	41,100	13,500	5,920	6,850	3,340	6,700	2,110
26	2,300	13,500	7,330	9,840	5,920	35,700	12,400	5,920	6,230	2,900	5,610	2,040
27	2,140	12,700	5,920	8,820	9,840	33,100	11,600	6,230	5,610	2,550	4,420	1,940
28	1,990	12,700	5,920	7,820	12,400	37,300	10,900	6,380	5,310	2,270	3,510	1,740
29	1,870	34,600	6,080	8,820	12,700	39,500	10,900	6,080	5,310	2,460	3,280	1,660
30	4,790	50,000	5,610	8,820		37,800	10,200	5,760	4,560	2,650	3,390	1,820
31	23,700		5,610	8,150		28,000		5,760		2,640	3,630	
Month		Observed			Corrected for diversion							
		Maximum	Minimum	Mean								
October.....		23,700	1,870	3,230	2,870		0.452		0.52			
November.....		50,000	7,660	19,400	20,130		3.17		3.54			
December.....		38,900	5,610	12,620	12,670		2.00		2.31			
January.....		21,100	6,080	12,640	12,450		1.96		2.26			
February.....		12,700	5,010	6,655	6,324		.997		1.08			
March.....		204,000	11,200	57,470	59,930		9.45		10.90			
April.....		51,200	10,200	24,630	24,310		3.83		4.27			
May.....		10,900	5,460	7,923	7,707		1.21		1.40			
June.....		14,600	3,630	6,400	6,003		.946		1.06			
July.....		4,710	2,270	3,219	2,329		.367		.42			
August.....		6,700	1,800	2,975	2,585		.407		.47			
September.....		4,010	1,660	2,446	2,084		.328		.37			
The year.....		204,000	1,660	13,340	13,320		2.10		20.60			

DELAWARE RIVER BASIN

Delaware River at Trenton, N. J.

Location.- Water-stage recorder, lat. 40°13'18", long. 74°46'38", 200 feet above Calhoun Street Bridge at Trenton, Mercer County, half a mile above mouth of Asspink Creek. Zero of gage is 7.77 feet (revised) above mean sea level (general adjustment of 1929).

Drainage area.- 6,796 square miles.

Records available.- February 1913 to September 1936.

Average discharge.- 23 years, 11,440 second-feet, corrected for diversions and storage.

Extremes.- Maximum discharge during year, 227,000 second-feet Mar. 19 (gage height, 16.56 feet); minimum, 1,850 second-feet Sept. 30 (gage height, -0.08 foot). Flow in canals not included.

1913-36: Maximum discharge, that of Mar. 19, 1936; minimum, 1,220 second-feet Sept. 18, 1932. Flow in canals not included.

Remarks.- Records good except those for periods of ice effect, Dec. 23 to Jan. 6, Jan. 20 to Mar. 10, which are fair, and are based on records for station at Riegelsville. Part of table of monthly discharge corrected for diversions in Trenton Power Race and Delaware & Raritan Canal, and for effect of storage on Wallenpaupack Creek, on Mongaup River, and in Lake Hopatcong. Trenton Power Race at station abandoned Nov. 15, 1935; no diversion thereafter.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,040	47,400	44,100	7,000	8,800	14,500	27,500	11,300	5,460	4,890	2,970	4,150
2	2,700	32,000	33,500	7,000	8,000	13,500	25,700	12,200	4,890	5,080	2,940	4,530
3	3,290	20,800	26,600	13,000	8,000	12,800	24,800	11,600	5,080	4,890	2,850	4,530
4	3,220	15,600	23,000	17,000	7,600	13,400	24,800	12,200	5,460	4,360	2,380	3,710
5	3,350	12,800	18,700	23,000	7,800	14,500	22,100	11,600	5,650	4,530	2,090	3,350
6	3,380	11,300	16,000	20,000	7,600	14,500	32,800	11,300	5,260	4,110	2,440	3,100
7	3,290	9,460	14,200	19,100	7,200	14,000	52,000	10,700	4,890	4,040	2,850	2,790
8	2,820	10,400	12,900	17,100	6,700	14,000	50,800	10,100	4,530	3,510	2,790	2,640
9	2,550	10,700	12,800	19,700	7,100	14,700	40,800	9,460	4,110	3,980	2,820	2,500
10	3,040	10,400	13,800	26,600	6,900	18,400	36,600	8,860	3,870	3,580	2,820	2,520
11	2,940	9,770	14,600	20,300	6,300	39,600	35,500	9,150	4,530	3,910	2,500	3,000
12	2,950	8,960	15,200	16,700	6,300	124,000	34,500	8,280	4,530	2,500	3,350	3,350
13	2,500	9,150	13,800	15,600	6,900	187,000	33,500	8,560	9,720	4,110	3,100	3,320
14	2,440	23,100	12,500	15,200	6,700	107,000	34,500	8,280	8,280	3,680	3,320	3,220
15	2,170	46,300	12,200	14,600	6,900	64,800	36,600	10,100	6,280	3,190	3,190	2,700
16	2,170	31,500	13,800	20,300	7,100	52,000	33,500	9,770	5,860	3,680	2,220	2,220
17	2,580	27,500	15,200	20,800	7,100	58,400	30,500	8,560	5,650	3,510	2,500	2,500
18	2,820	31,500	15,200	19,100	6,800	139,000	27,500	7,740	6,060	3,480	2,760	3,040
19	2,520	25,700	13,800	17,900	6,500	214,000	23,900	7,220	11,000	3,290	2,470	2,880
20	2,360	22,100	12,500	13,500	6,400	168,000	21,200	8,000	13,900	3,150	2,380	2,440
21	2,380	22,100	11,600	11,000	6,400	104,000	19,500	9,150	14,200	2,730	2,250	2,880
22	2,300	24,800	10,100	12,000	6,400	86,000	18,300	8,280	13,500	2,360	2,470	2,520
23	2,120	23,000	9,000	11,300	6,500	74,200	17,900	7,470	10,400	2,790	2,760	2,220
24	2,330	20,300	8,000	9,200	5,900	54,500	17,500	6,970	8,860	3,190	3,120	2,580
25	2,790	17,500	7,600	10,500	5,700	44,100	15,200	6,500	7,740	3,540	6,970	2,440
26	2,610	15,200	8,500	11,500	6,800	38,700	14,200	6,060	6,970	3,810	7,220	2,360
27	2,410	14,200	7,000	10,300	11,200	35,500	12,900	6,500	6,280	3,320	5,650	2,300
28	2,300	13,800	6,900	9,000	14,100	39,700	12,500	6,500	5,860	2,850	4,530	2,170
29	2,170	33,200	7,000	9,800	14,400	43,000	11,900	6,500	5,650	2,550	4,180	1,940
30	4,040	52,000	6,400	10,000		36,600	11,600	6,060	5,260	2,790	3,810	1,920
31	18,500		6,400	9,400		31,500		5,860		3,000	3,910	

Month	Observed			Corrected for diversion		
	Maximum	Minimum	Mean	Mean	Per square mile	Run-off in inches
October	18,500	2,120	3,225	2,970	0.437	0.50
November	52,000	8,860	21,750	22,500	3.31	3.69
December	44,100	6,400	14,280	14,360	2.11	2.43
January	26,600	7,000	14,760	14,570	2.14	2.47
February	14,400	5,700	7,583	7,252	1.07	1.15
March	214,000	12,800	60,840	63,290	9.31	10.73
April	52,000	11,600	26,680	26,370	3.82	4.33
May	12,200	5,860	8,736	8,606	1.27	1.46
June	14,200	3,870	7,006	6,694	.985	1.10
July	5,080	2,360	3,626	2,808	.413	.48
August	7,220	2,090	3,333	2,938	.432	.50
September	4,530	1,920	2,861	2,494	.367	.41
The year	214,000	1,920	14,590	14,610	2.15	29.25

DELAWARE RIVER BASIN

Lackawaxen River at West Hawley, Pa.

Location.- Chain gage, lat. 41°28'10", long. 75°11'15", at Riverside Bridge, at West Hawley, Wayne County, half a mile above mouth of Middle Creek. Zero of gage is 885.50 feet above mean sea level.

Drainage area.- 206 square miles.

Records available.- October 1931 to September 1936 in reports of U. S. Geological Survey; May 1921 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 12 years (1924-36), 354 second-feet.

Extremes.- Maximum discharge during year, 14,000 second-feet Mar. 18 (gage height, 15.32 feet, from floodmarks) from rating curve extended above 3,000 second-feet; minimum, 16 second-feet Aug. 3, 9 (gage height, 0.82 foot).

1921-36: Maximum discharge, that of Mar. 18, 1936; minimum, 15 second-feet Sept. 2, 3, 1929 (gage height, 0.74 foot).

Remarks.- Records poor. Discharge for periods of ice effect, Dec. 23 to Jan. 4, Jan. 15 to Mar. 11, determined from gage heights, weather records, and discharge measurement. Discharge for high stages determined from graphs based on twice-daily gage readings. Regulation at low stages from operation of mills upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	69	1,440	785	200	135	150	592	271	55	61	26	103
2	60	730	648	225	133	145	702	224	53	61	28	85
3	53	565	441	270	135	135	840	201	66	55	19	69
4	43	401	401	380	139	145	565	231	53	49	26	69
5	38	321	340	515	137	175	490	170	53	40	26	61
6	38	340	284	491	135	160	1,270	153	49	46	40	50
7	34	340	266	380	135	145	1,200	146	28	50	56	50
8	37	401	284	340	135	130	1,020	148	50	49	31	43
9	35	340	360	302	135	175	840	128	63	47	16	42
10	35	284	444	284	135	380	900	125	58	49	26	47
11	41	266	444	302	135	2,930	1,090	118	55	42	37	45
12	38	263	401	302	135	7,100	1,140	101	50	27	50	43
13	35	1,730	321	321	138	3,370	1,020	93	46	26	40	28
14	34	2,570	321	284	145	1,860	340	112	47	54	40	40
15	33	1,140	444	265	153	1,720	940	97	50	35	38	52
16	35	730	620	250	148	2,330	785	91	49	36	31	49
17	37	441	515	225	142	6,000	620	83	50	32	24	49
18	41	675	401	215	137	10,900	565	82	78	30	26	50
19	44	675	340	205	130	5,730	515	118	911	26	23	34
20	37	840	302	195	129	3,890	442	121	334	17	29	22
21	38	900	259	190	131	2,870	465	118	254	23	32	36
22	41	785	214	180	135	2,820	592	101	173	26	42	43
23	40	620	205	175	143	1,890	465	87	130	26	231	31
24	38	467	195	165	149	1,340	373	74	128	29	490	35
25	41	401	185	160	153	1,140	330	78	114	25	178	38
26	43	401	180	155	158	1,010	290	63	61	20	116	40
27	37	401	175	150	160	1,060	252	66	80	17	39	29
28	38	738	180	145	158	1,510	258	66	78	22	80	38
29	37	2,050	185	145	155	1,040	224	59	25	26	135	36
30	1,680	1,270	190	140		969	217	59	80	24	145	38
31	2,780		195	135		1,300		61		26	107	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	2,780	33	182	0.379	1.01
November	2,570	263	751	3.85	4.07
December	785	175	340	1.65	1.90
January	515	135	248	1.20	1.39
February	160	129	141	.694	.74
March	10,900	130	2,097	10.2	11.76
April	1,270	217	657	3.19	3.53
May	271	59	118	.573	.66
June	911	28	112	.544	.61
July	61	17	34.9	.169	.19
August	490	16	73.6	.357	.41
September	103	22	46.5	.226	.25
The year	10,900	16	401	1.95	26.54

Wallenpaupack Creek at Wilsonville, Pa.

Location.- At hydroelectric plant of Pennsylvania Power & Light Co. with dam, lat. 41°27'35", long. 75°11'5", at Wilsonville, Wayne County, 1½ miles south of Hawley.

Drainage area.- 228 square miles.

Records available.- October 1918 to September 1921, June 1926 to September 1936 in reports of U. S. Geological Survey; July 1908 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 20 years (1913-22, 1925-36), 377 second-feet, corrected for storage.

Remarks.- Records good. Flow computed from output of generators. No discharge over spillway during year except an estimated total of 38 million cubic feet for the period Mar. 20-26. Daily discharge not corrected for storage. No corrections made for evaporation from Lake Wallenpaupack. Discharge measurements, records of powerplant operations, and water-surface elevation in lake and tailrace furnished by Pennsylvania Power & Light Co.

Daily and monthly discharge, in second-feet, 1935-36.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	599	130	83	0	235	44	1,710	183	777	187	104	244
2	710	197	264	316	56	734	1,740	103	925	446	46	0
3	725	0	247	322	429	432	1,670	54	1,060	408	818	8.1
4	665	519	221	297	324	492	692	579	954	0	805	0
5	233	93	223	0	313	591	260	552	943	0	792	0
6	200	105	192	275	155	156	1,180	481	275	586	960	0
7	680	322	212	277	467	80	1,600	421	0	284	772	0
8	567	222	86	522	357	6.2	987	374	950	695	233	601
9	469	302	221	720	125	21	1,100	381	926	872	88	744
10	296	92	238	279	489	163	1,110	17	869	892	521	719
11	81	229	204	214	515	350	1,040	550	953	714	837	729
12	199	613	208	30	506	418	350	542	933	221	623	234
13	16	222	219	540	508	213	989	646	36	829	734	12
14	794	171	04	439	460	42	1,120	498	0	843	730	397
15	751	158	31	804	332	0	1,100	270	98	865	0	334
16	448	119	200	269	57	194	954	114	661	767	0	213
17	345	0	150	276	420	367	876	7.5	289	556	211	0
18	443	217	129	412	558	1,090	1,010	285	431	0	0	533
19	163	158	167	260	488	1,680	184	435	377	14	303	64
20	117	155	233	497	501	1,780	261	184	173	834	585	0
21	457	148	224	576	515	1,790	640	87	0	829	173	585
22	772	163	49	607	97	1,790	708	320	446	924	390	277
23	551	260	376	945	6.5	1,800	383	0	335	877	0	279
24	375	4.9	289	868	518	1,820	329	0	253	763	519	288
25	190	204	0	197	511	1,820	124	520	141	222	503	82
26	0	391	291	69	882	1,820	20	451	144	78	143	0
27	0	232	955	962	856	1,750	388	409	596	665	136	0
28	11	0	749	967	497	1,740	459	470	47	806	0	161
29	184	141	590	391	162	1,680	212	326	269	827	0	680
30	51	388	616	649		1,720	532	0	527	820	0	164
31	200		222	416		1,720		0		812	340	
Month	Observed			Corrected for storage								
	Maximum	Minimum	Mean	Mean	Per square mile	Run-off in inches						
October	794	0	365	72.2	0.317	0.37						
November	613	0	199	594	2.61	2.91						
December	955	0	253	358	1.57	1.81						
January	967	0	432	288	1.26	1.45						
February	882	6.5	392	194	.851	.92						
March	1,820	0	913	2,570	11.3	13.03						
April	1,740	20	791	460	2.02	2.25						
May	646	0	299	147	.645	.74						
June	1,060	0	480	138	.605	.68						
July	924	0	569	- 65.9	-.289	-.33						
August	960	0	367	- 9.00	-.039	-.04						
September	744	0	245	- 41.0	-.180	-.20						
The year	1,220	0	442	396	1.74	23.67						

Bushkill Creek at Shoemakers, Pa.

Location.- Chain gage, lat. 41°5'15", long. 75°2'20", at highway bridge three-quarters of a mile northwest of Shoemakers, Monroe County, and 2 miles southwest of Bushkill. Zero of gage is 421.13 feet above mean sea level.

Drainage area.- 117 square miles.

Records available.- October 1918 to September 1920, October 1931 to September 1936 in reports of U. S. Geological Survey; September 1908 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 24 years (1908-16, 1920-36), 235 second-feet.

Extremes.- Maximum discharge observed during year, 3,630 second-feet Mar. 18 (gage height, 6.92 feet) from rating curve extended above 1,600 second-feet; minimum, 8.0 second-feet Sept. 28, 29 (gage height, 0.98 foot).

1908-36: Maximum discharge, 3,910 second-feet July 24, 1920 (gage height, 7.2 feet, from graph based on gage readings) from rating curve extended above 1,600 second-feet; minimum, 4 second-feet Sept. 21, 26, 1932 (gage height, 0.90 foot).

Remarks.- Records fair except those for periods of ice effect, Dec. 23 to Jan. 2, Jan. 21 to Mar. 11, which are poor and were determined from gage heights, weather records, one discharge measurement, and by comparison with records for station on McMichael Creek at Stroudsburg. Discharge for high stages determined from graphs based on twice-daily gage readings. Some regulation at low stages from operation of mills upstream.

Daily and monthly discharge, in second-feet, 1935-36.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	41	660	942	190	168	138	510	326	112	161	29	41
2	44	540	750	250	165	140	480	241	101	139	27	36
3	56	452	630	750	164	142	452	241	97	128	25	42
4	54	348	540	570	165	143	400	279	149	119	25	35
5	46	296	480	452	167	145	392	252	105	114	23	30
6	51	248	400	370	168	150	1,020	230	89	101	27	27
7	48	227	348	317	170	155	975	216	83	91	29	23
8	43	227	326	287	175	165	845	203	81	85	26	21
9	41	203	339	326	177	185	720	181	68	80	23	19
10	38	184	352	452	175	250	720	178	69	74	21	19
11	34	175	334	375	170	500	720	164	85	69	71	17
12	34	166	304	357	165	2,580	660	175	200	66	51	15
13	31	357	268	330	160	1,980	630	166	181	63	35	15
14	28	375	260	304	155	1,460	540	227	213	63	29	15
15	26	330	266	317	155	1,310	480	194	197	58	25	15
16	25	300	357	540	160	1,430	452	181	152	50	25	15
17	23	313	304	425	160	2,000	400	161	119	46	23	15
18	23	357	260	375	160	3,230	366	152	302	46	21	15
19	24	339	248	339	155	2,720	339	224	223	44	19	14
20	23	362	227	304	145	2,000	308	248	660	42	17	12
21	23	425	210	285	140	1,840	291	220	942	41	17	11
22	23	400	197	270	135	1,550	291	191	660	38	19	10
23	23	375	180	255	130	1,210	268	172	430	36	19	9.0
24	25	330	175	240	130	1,050	252	155	375	93	154	9.0
25	23	326	165	230	130	877	230	155	357	68	114	10
26	21	304	160	220	132	752	216	136	263	40	78	9.0
27	21	291	160	210	133	852	197	142	241	43	57	9.0
28	19	747	160	200	134	860	187	139	227	41	47	8.0
29	19	1,590	160	190	136	713	181	124	191	38	51	8.5
30	451	1,170	165	180		623	169	114	172	35	50	
31	780		170	175		600	117			30	44	
Month		Maximum	Minimum	Mean	Per square mile	Run-off in inches						
October		780	19	69.7	0.596	0.69						
November		1,590	166	414	3.54	3.95						
December		942	160	317	2.71	3.12						
January		750	175	325	2.78	3.20						
February		177	130	154	1.32	1.42						
March		3,230	138	1,024	8.75	10.09						
April		1,020	169	456	3.90	4.35						
May		326	114	191	1.63	1.89						
June		942	68	260	2.22	2.48						
July		161	30	69.5	.594	.68						
August		164	17	39.4	.337	.39						
September		42	8.0	17.9	.153	.17						
The year		3,230	8.0	279	2.38	32.42						

DELAWARE RIVER BASIN

McMichaels Creek at Stroudsburg, Pa.

Location.- Chain gage, lat. 40°58'40", long. 75°12'30", at railroad bridge at Wilkes-Barre and Eastern Railroad car shops three-quarters of a mile southwest of Stroudsburg, Monroe County. Zero of gage is 403.92 feet above mean sea level. Drainage area.- 64.4 square miles.

Records available.- October 1920 to September 1921, October 1931 to September 1936 in reports of U. S. Geological Survey; August 1911 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 23 years (1911-18, 1920-36), 120 second-feet.

Extremes.- Maximum discharge during year, 4,670 second-feet Mar. 12 (gage height, 10.5 feet, from floodmarks) from rating curve extended above 800 second-feet; minimum, 12 second-feet Sept. 13 (gage height, 2.54 feet).

1911-36: Maximum discharge, that of Mar. 12, 1936; minimum, 7.2 second-feet Nov. 30, 1930 (gage height, 2.34 feet); minimum daily discharge, 9.0 second-feet Nov. 30, 1930.

Remarks.- Records fair except those for extremely high stage and for periods of ice effect, which are poor. Discharge for periods of ice effect, Dec. 19 to Jan. 2, Jan. 18 to Mar. 8, determined from gage heights, weather records, one discharge measurement, and by comparison with records for station on Bushkill Creek at Shoemakers. Discharge for high stages determined from graphs based on twice-daily gage readings. Regulation at low stages from operation of power plants upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	30	274	444	77	90	64	258	117	42	42	21	23		
2	43	106	372	100	90	70	265	100	42	35	19	25		
3	40	132	304	669	91	77	246	98	41	29	21	21		
4	39	110	255	375	92	83	200	98	46	31	22	24		
5	39	106	218	277	93	90	212	82	42	33	16	17		
6	74	95	197	163	94	100	1,110	76	39	31	19	16		
7	40	90	166	164	96	110	631	71	38	28	21	20		
8	39	97	166	144	97	125	481	72	35	27	19	18		
9	35	78	136	236	92	147	389	68	38	28	17	22		
10	36	74	161	407	88	233	462	62	36	27	21	20		
11	31	74	148	255	85	1,590	407	62	34	36	32	16		
12	38	76	132	224	83	3,430	354	64	50	29	25	14		
13	34	206	123	206	32	1,500	354	65	68	26	24	14		
14	35	169	130	197	83	832	297	80	61	30	21	18		
15	35	137	121	180	82	638	265	61	46	26	20	16		
16	31	132	169	425	80	607	261	57	42	25	23	18		
17	35	183	200	255	73	1,570	221	55	35	23	26	18		
18	41	337	110	215	67	2,740	200	54	48	24	18	16		
19	32	274	100	180	62	2,050	135	71	123	22	15	16		
20	26	337	92	165	58	1,320	172	67	55	25	17	13		
21	30	320	85	145	55	1,230	158	57	46	24	16	21		
22	32	320	79	135	52	793	158	52	38	24	21	18		
23	32	304	74	130	48	598	139	52	38	23	27	15		
24	36	249	70	123	51	523	128	50	35	35	136	20		
25	33	224	67	117	52	449	117	49	38	31	32	21		
26	31	200	65	110	53	369	115	47	36	27	26	16		
27	28	194	63	105	54	481	106	61	33	23	26	14		
28	33	239	62	102	56	437	100	53	36	26	22	16		
29	48	796	63	97	58	346	100	46	35	23	26	15		
30	386	579	65	94		323	111	47	35	19	36	21		
31	646		69	92		294		44		18	26			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October					646		26		67.4		1.05		1.21	
November					796		74		220		3.42		3.82	
December					444		62		147		2.29		2.63	
January					669		77		199		3.09		3.56	
February					97		48		74.4		1.15		1.24	
March					3,430		64		749		11.6		13.37	
April					1,110		100		273		4.24		4.73	
May					117		44		65.7		1.02		1.18	
June					128		33		44.5		.691		.77	
July					42		18		27.4		.425		.49	
August					136		15		26.2		.407		.47	
September					25		13		18.1		.281		.31	
The year					3,430		13		160		2.48		33.78	

DELAWARE RIVER BASIN

Lehigh River at Tannery, Pa.

Location.- Water-stage recorder, lat. 41°2'25", long. 75°45'50", 600 feet above highway bridge at Tannery, Carbon County, and 1½ miles above mouth of Black Creek. Zero of gage is 1,041.98 feet above mean sea level.

Drainage area.- 322 square miles.

Records available.- October 1919 to September 1921, October 1928 to September 1936 in reports of U. S. Geological Survey; June 1914 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 17 years (1914-15, 1919-26, 1927-36), 675 second-feet.

Extremes.- Maximum discharge during year, 21,800 second-feet Mar. 12 (gage height, 13.34 feet); minimum, 0.9 second-foot Sept. 28 (gage height, 1.07 feet); minimum daily discharge, 7.2 second-feet Aug. 5.

1914-36: Maximum discharge, that of Mar. 12, 1936; minimum, that of Sept. 28, 1936; minimum daily discharge, that of Aug. 5, 1936.

Remarks.- Records fair except those for periods of ice effect or plugged intake, which are poor. Discharge for period of ice effect, Dec. 22 to Mar. 10, determined from gage heights, weather records, one discharge measurement, and by comparison with records for station at Bethlehem. Discharge for period of plugged intake, Apr. 1-25, determined by comparison with records for station at Bethlehem. Regulation from operation of power plants upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	163	1,460	1,900	465	360	800	1,050	659	275	224	72	75
2	163	913	1,460	500	350	700	1,160	502	252	203	39	48
3	170	643	1,190	1,800	350	700	1,000	460	229	182	31	53
4	170	495	983	1,300	340	750	900	527	220	199	80	72
5	156	414	956	1,050	340	800	1,100	490	207	182	7.2	41
6	118	376	784	920	330	650	2,000	448	136	174	72	33
7	143	345	752	830	320	600	1,590	414	174	167	76	47
8	129	345	678	760	320	565	1,400	391	167	155	26	46
9	124	334	768	730	310	539	1,300	369	167	147	73	44
10	121	310	912	860	300	892	1,200	347	159	147	19	42
11	121	295	880	710	290	6,220	1,200	331	151	174	99	46
12	124	286	784	610	280	17,200	1,100	316	346	137	87	45
13	116	930	708	580	280	6,950	1,000	316	391	155	34	32
14	127	1,750	738	640	280	3,790	950	391	363	144	87	44
15	121	1,240	752	620	290	2,840	900	363	342	133	31	51
16	116	929	1,000	750	290	2,770	860	321	285	122	90	43
17	113	888	904	720	300	6,540	820	300	233	119	75	44
18	107	938	776	600	310	16,200	780	271	223	115	95	56
19	116	856	692	530	280	9,060	740	349	535	105	82	51
20	107	947	643	520	270	5,560	700	585	508	105	32	30
21	104	1,100	628	630	260	4,350	660	460	445	115	80	56
22	129	1,020	590	620	250	3,600	640	380	490	109	30	53
23	124	896	540	540	250	2,620	610	342	374	85	79	42
24	121	745	520	600	250	2,160	580	331	342	100	117	20
25	118	685	500	520	270	1,860	540	347	408	132	126	20
26	113	629	490	480	350	1,590	521	336	326	122	115	80
27	104	602	480	450	800	1,580	494	363	271	122	96	46
28	102	1,590	470	430	1,000	1,730	454	385	275	119	77	18
29	104	4,370	460	415	900	1,460	436	342	247	105	75	37
30	684	2,640	450	400		1,260	502	316	216	89	83	72
31	1,760		450	380		1,130		295		80	88	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October.....					1,760	102	196	0.609		0.70		
November.....					4,370	286	966	3.00		3.35		
December.....					1,900	450	769	2.39		2.76		
January.....					1,800	380	676	2.10		2.42		
February.....					1,000	250	363	1.13		1.22		
March.....					17,200	539	3,467	10.8		12.45		
April.....					2,000	436	906	2.91		3.14		
May.....					659	271	389	1.21		1.40		
June.....					535	151	294	.913		1.02		
July.....					224	80	138	.429		.49		
August.....					126	7.2	70.1	.218		.25		
September.....					80	18	46.2	.143		.16		
The year.....					17,200	7.2	693	2.15		29.36		

Neshaminy Creek near Langhorne, Pa.

Location.— Water-stage recorder, lat. 40°10'25", long. 74°57'30", at bridge on State Highway 213, half a mile below mouth of Mill Creek, and 1.7 miles west of Langhorne, Bucks County. Zero of gage is 40.57 feet above mean sea level.

Drainage area.- 210 square miles.

Records available.- October 1934 to September 1936.

Extremes.— Maximum discharge during year, 9,520 second-feet Jan. 3 (gage height, 12.53 feet) from rating curve extended above 3,000 second-feet; minimum, 8.1 second-foot Sept. 18 (gage height, 0.63 foot); minimum daily discharge, 13 second-foot Sept. 17.

1934-36: Maximum discharge, that of Jan. 3, 1936; minimum, that of Sept. 18, 1936; minimum daily discharge, that of Sept. 17, 1936.

Maximum stage known, 17.3 feet, from floodmarks, Aug. 23, 1933 (discharge not determined).

Remarks. - Records good except those for extremely high stages and those for periods of ice effect, which are fair. Discharge for periods of ice effect, Dec. 22 to Jan. 2, Jan. 24 to Mar. 4, determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations in adjacent drainage areas. Regulation from power operations upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	43	372	339	122	112	2,000	335	123	60	39	18	32		
2	47	184	290	130	110	1,300	335	120	54	40	15	41		
3	45	129	255	6,430	110	1,100	391	119	55	34	14	27		
4	44	108	224	1,240	115	1,300	310	883	49	31	15	27		
5	42	98	176	635	130	1,600	262	298	48	28	14	23		
6	42	91	190	468	120	1,170	2,220	185	45	25	15	20		
7	50	89	159	360	115	668	929	152	41	22	17	19		
8	52	100	182	347	110	531	575	137	45	23	15	21		
9	58	100	223	3,090	105	630	428	123	41	21	15	18		
10	46	84	275	2,180	100	912	684	112	43	21	15	17		
11	43	84	245	615	96	3,520	808	106	40	21	15	14		
12	47	105	340	461	92	3,860	616	101	48	411	14	14		
13	35	158	217	428	90	1,250	585	156	92	125	14	14		
14	31	127	213	461	88	665	451	201	176	54	33	15		
15	55	103	247	564	90	525	369	131	86	39	40	18		
16	43	91	520	1,130	100	451	347	104	64	30	58	15		
17	35	2,470	306	493	115	442	298	93	49	27	215	13		
18	34	2,100	232	418	135	3,670	266	88	66	24	75	29		
19	22	947	209	475	170	1,170	247	93	114	16	49	61		
20	23	495	195	762	155	898	228	120	124	21	20	43		
21	41	382	162	1,070	145	1,350	213	107	63	23	15	48		
22	39	310	175	518	140	1,240	195	84	46	20	15	33		
23	41	266	165	264	138	585	182	74	40	23	14	27		
24	39	239	155	220	135	495	168	72	39	26	57	25		
25	42	220	150	190	135	451	159	72	43	28	86	19		
26	44	217	145	170	160	382	152	63	38	20	351	17		
27	38	195	140	150	1,500	827	146	71	35	22	116	15		
28	39	212	135	140	3,400	1,590	140	86	34	23	51	14		
29	39	1,730	130	130	2,100	629	137	74	40	18	227	17		
30	646	512	128	120		461	131	67	40	18	152	18		
31	804		125	115		391		60		15	79			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October.....					804		22		85.6		0.408		0.47	
November.....					2,470		84		411		1.96		2.19	
December.....					520		125		214		1.02		1.18	
January.....					6,430		115		771		3.67		4.23	
February.....					3,400		88		349		1.66		1.79	
March.....					3,860		382		1,163		5.54		6.39	
April.....					2,220		131		410		1.95		2.18	
May.....					883		60		138		.657		.76	
June.....					176		34		58.6		.279		.31	
July.....					411		15		41.5		.198		.23	
August.....					351		14		59.6		.284		.33	
September.....					61		13		23.8		.113		.13	
The year.....					6,430		13		311		1.48		20.19	

Schuylkill River at Pottstown, Pa.

Location.— Water-stage recorder, lat. 40°14'30", long. 75°39'5", at Hanover Street Bridge, at Pottstown, Montgomery County, one-third of a mile below mouth of Manatawny Creek. Zero of gage is 117.81 feet above mean sea level.

Drainage area.- 1,147 square miles.

Records available.— October 1931 to September 1936 in reports of U. S. Geological Survey; August 1927 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Extremes.— Maximum discharge during year, 31,800 second-feet Mar. 12 (gage height, 15.13 feet) from rating curve extended above 15,000 second-feet; minimum, 303 second-feet Sept. 23; minimum daily discharge, 349 second-feet Sept. 28.

1927-36: Maximum discharge, 44,200 second-foot Aug. 24, 1933 (gage height 19.2 feet) from rating curve extended above 15,000 second-feet; minimum, 87 second-foot Aug. 13 1930 (gage height, 0.43 foot); minimum daily discharge, 175 second-foot Sept. 19, 1932.

Remarks.— Records good except those for periods of ice effect, Dec. 23 to Jan. 2, Jan. 21 to Feb. 26, which are poor and were determined from gage heights, weather records, and by comparison with records for station at Philadelphia. Discharge for period of no gage record, Sept. 15-18, determined by comparison with records for station at Philadelphia. Regulation at low stages from operation of mills upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	500	761	3,630	1,700	1,950	5,270	3,620	1,880	831	871	428	640
2	487	605	2,950	2,400	1,850	4,720	3,540	1,880	815	847	416	684
3	528	528	2,460	9,170	1,750	4,120	3,620	2,000	799	776	378	768
4	480	480	2,130	7,600	1,750	4,370	3,000	2,410	895	859	416	768
5	468	461	1,760	4,720	1,620	5,080	2,700	2,480	823	784	428	722
6	448	435	1,640	3,710	1,790	4,900	9,350	2,340	745	706	441	568
7	468	448	1,460	3,020	1,780	4,280	11,900	2,270	699	676	441	422
8	468	448	1,440	2,670	1,600	4,000	7,690	2,140	714	684	416	473
9	448	442	1,700	4,110	1,500	4,420	5,940	2,000	729	618	384	500
10	442	423	1,640	6,860	1,450	6,180	5,840	1,570	729	596	304	467
11	468	411	1,580	4,540	1,420	13,000	5,310	1,390	737	647	416	416
12	480	461	1,580	3,790	1,500	27,700	4,720	1,210	998	618	487	422
13	454	901	1,420	3,400	1,500	23,900	4,720	1,220	2,280	604	409	409
14	435	1,290	1,530	3,180	1,390	12,600	4,200	1,420	2,840	582	384	403
15	454	1,010	1,820	3,020	1,500	8,670	3,860	1,220	1,350	548	372	410
16	429	448	2,530	4,200	1,750	6,980	3,700	1,110	1,040	506	674	400
17	381	3,820	2,460	3,710	2,100	8,290	3,380	1,060	904	506	660	460
18	393	6,500	2,320	3,250	2,350	20,900	3,070	1,050	831	493	500	560
19	417	3,950	2,130	3,400	2,400	20,400	2,840	1,120	2,370	441	390	390
20	417	3,630	2,000	2,500	2,100	14,400	2,700	1,300	1,650	480	378	366
21	423	3,180	1,700	2,400	1,800	12,500	2,550	1,170	1,150	467	396	384
22	411	2,740	1,380	2,300	1,620	10,800	2,550	1,080	979	378	1,250	384
23	435	2,320	1,250	2,250	1,560	8,170	2,340	997	799	416	966	354
24	423	1,940	1,150	2,270	1,550	6,920	2,200	945	970	402	742	366
25	423	1,640	1,050	2,300	1,650	5,880	2,070	928	1,100	604	926	366
26	399	1,530	1,020	2,250	3,000	4,920	2,000	871	920	548	1,100	384
27	387	1,450	1,000	2,250	9,210	5,360	2,000	1,060	807	527	879	378
28	393	1,610	1,020	2,200	5,650	6,300	1,940	1,260	784	502	745	349
29	399	5,400	1,100	2,180	4,900	4,750	1,880	1,040	839	554	784	354
30	1,350	4,540	1,200	2,150	4,550	4,550	1,880	895	839	568	1,230	384
31	1,150		1,400	2,050		4,070		863		473	815	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					1,350	381	492	0.429		0.49		
November					6,500	411	1,793	1.56		1.74		
December					3,630	1,000	1,726	1.50		1.73		
January					9,170	1,700	3,405	2.97		3.42		
February					8,210	1,300	2,236	1.95		2.10		
March					27,700	4,000	8,948	7.80		8.99		
April					11,900	1,280	3,900	3.40		3.79		
May					2,480	863	1,425	1.24		1.43		
June					2,840	699	1,065	.929		1.04		
July					871	378	596	.520		.60		
August					1,250	372	601	.524		.60		
September					768	349	466	.406		.45		
The year					27,700	349	2,225	1.94		26.38		

DELAWARE RIVER BASIN

Schuylkill River at Philadelphia, Pa.

Location.- Water-stage recorder, lat. 39°58'0", long. 75°11'20", just above Fairmount Dam, at Philadelphia, Philadelphia County. Zero of gage is at 0.00 foot elevation, city of Philadelphia datum, or 5.23 feet above mean sea level, Sandy Hook datum.

Drainage area.- 1,893 square miles.

Records available.- January 1898 to December 1912, September 1931 to September 1936 in reports of U. S. Geological Survey; January 1903 to December 1912, September 1931 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 14 years (1903-12, 1931-36), 2,574 second-feet.

Extremes.- Maximum discharge during year, 48,400 second-feet Mar. 12 (gage height, 11.62 feet) from rating curve extended above 21,000 second-feet; minimum, 9.0 second-feet Sept. 27 (gage height, 5.47 feet); minimum daily discharge, 97

1898-1912, 1931-36: Maximum gage height, about 14.8 feet Mar. 1, 1902 (discharge not determined); no flow over dam at times; minimum daily discharge, 38 second-feet Sept. 20, 1932.

Maximum stage known, about 17.0 feet Oct. 4, 1869 (discharge not determined).

Remarks.- Records good except those for extremely high stages, which are fair. Regulation from storage reservoirs upstream. Water supply for city of Philadelphia diverted above station not included in records except in part of monthly table. Record of diversion furnished by city of Philadelphia.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	486	3,040	5,910	1,360	1,970	11,200	5,590	2,210	816	831	316	596
2	554	1,430	4,780	1,630	1,870	10,300	5,240	2,160	750	770	254	390
3	526	899	3,990	22,600	1,730	7,840	5,580	2,260	684	708	260	402
4	518	758	3,320	17,400	1,730	8,080	4,950	3,290	654	693	232	488
5	464	594	2,780	8,960	1,780	9,280	4,160	3,000	798	692	222	410
6	485	651	2,370	7,380	1,760	9,030	13,100	2,890	641	651	272	445
7	500	600	2,160	6,920	1,780	7,360	17,600	2,630	545	570	300	355
8	496	632	2,020	7,540	1,600	6,240	11,200	2,470	594	502	281	212
9	493	562	2,420	9,040	1,520	6,570	8,350	2,310	582	462	240	234
10	434	478	2,840	15,300	1,470	8,710	8,700	1,970	546	433	212	234
11	509	588	2,730	8,410	1,430	19,100	8,440	1,690	584	468	217	177
12	534	597	3,220	6,440	1,300	40,300	7,660	1,470	949	788	226	173
13	414	797	2,420	5,940	1,300	34,200	7,240	1,260	4,670	596	260	162
14	452	1,690	2,260	5,470	1,390	17,300	6,580	1,560	4,130	526	200	156
15	462	1,730	2,730	4,780	1,470	11,600	5,760	1,520	2,340	429	154	122
16	434	1,300	4,490	7,610	1,920	9,330	5,410	1,300	1,390	374	184	140
17	428	10,900	4,100	6,400	2,310	9,250	5,010	1,190	899	342	436	131
18	388	19,300	3,490	5,360	2,380	28,200	4,490	1,160	898	333	412	186
19	340	9,160	3,160	5,700	2,460	26,900	4,160	1,160	2,400	326	278	309
20	334	6,820	2,950	4,580	2,140	19,500	3,880	1,270	2,700	298	190	176
21	426	5,590	2,520	3,860	1,830	17,000	3,600	1,390	1,520	370	153	150
22	396	4,720	1,730	4,210	1,690	16,900	3,440	1,160	1,140	298	341	125
23	418	3,880	1,690	3,110	1,560	11,600	3,320	1,050	818	244	1,010	128
24	464	3,270	1,780	2,730	1,560	9,690	3,000	940	875	371	1,020	117
25	403	2,780	1,600	2,050	1,620	8,430	2,840	946	1,050	463	562	101
26	382	2,370	1,430	2,310	3,550	7,280	2,630	856	1,080	494	1,300	113
27	368	2,160	1,060	2,520	7,690	8,180	2,630	878	833	415	1,280	97
28	411	2,070	1,140	2,110	10,200	12,200	2,420	1,120	753	560	726	120
29	374	10,100	1,090	2,020	9,800	8,170	2,420	1,180	828	531	1,530	115
30	2,120	8,080	1,120	2,160		6,820	2,310	943	782	400	1,610	100
31	5,880	1,250	2,160			6,260		792		385	1,110	
Month	Observed			Diversions		Corrected for diversion						
	Maximum	Minimum	Mean	(Mean)		Mean	Per square mile	Run-off in inches				
October.....	5,880	334	674	232		906	0.479	0.55				
November.....	19,300	478	3,587	225		3,812	2.01	2.24				
December.....	5,910	1,060	2,598	232		2,950	1.49	1.72				
January.....	22,600	1,360	6,063	236		6,299	3.33	3.84				
February.....	10,200	1,300	2,580	253		2,933	1.50	1.62				
March.....	40,300	6,240	13,320	232		13,550	7.16	8.26				
April.....	17,600	2,310	5,724	233		5,957	3.15	3.51				
May.....	3,290	792	1,614	242		1,856	.980	1.13				
June.....	4,670	545	1,242	241		1,483	.783	.87				
July.....	831	244	494	254		748	.395	.46				
August.....	1,610	153	509	250		759	.401	.46				
September.....	596	97	222	256		478	.253	.28				
The year.....	40,300	97	3,228	240		3,468	1.83	24.94				

DELAWARE RIVER BASIN

Little Schuylkill River at Tamaqua, Pa.

Location.- Water-stage recorder, lat. 40°48'20", long. 75°58'20", at Panther Valley Water Co. pumping plant, 0.6 mile above Tamaqua, Schuylkill County, and 0.8 mile above mouth of Panther Creek. Zero of gage is 817.46 feet above mean sea level.

Drainage area.- 42.9 square miles.

Records available.- October 1919 to September 1921, October 1931 to September 1936 in reports of U. S. Geological Survey; June 1916 to September 1936 in reports of Pennsylvania Department of Forests and Waters. Records prior to Oct. 1, 1928, obtained at a site 0.6 mile downstream.

Average discharge.- 18 years (1916-17, 1919-36), 93.3 second-feet.

Extremes.- Maximum discharge during year, 1,940 second-feet Mar. 18 (gage height, 5.65 feet); minimum, 6.9 second-feet Aug. 14 (gage height, 1.33 feet). 1916-36: Maximum discharge, 3,740 second-feet Aug. 24, 1933 (gage height, 7.50 feet); minimum, 1.8 second-feet Dec. 18, 1930 (gage height, 1.21 feet); minimum daily discharge, 3.0 second-feet Dec. 23, 1930.

Remarks.- Records good except those for periods of ice effect and for period of plugged intake, which are poor. Discharge for periods of ice effect, Dec. 22 to Jan. 2, Jan. 24 to Feb. 26, determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for period of plugged intake Feb. 27 to Mar. 11, determined by comparison with records for stations mentioned above. Regulation from storage in Still Creek Reservoir. Water diverted above station not included in records except in part of monthly table. Record of diversion furnished by Panther Valley Water Co.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	29	184	41	38	120	114	51	25	24	8.0	15
2	13	23	145	45	36	115	116	49	21	18	9.6	16
3	14	21	120	163	34	115	105	49	21	16	9.5	17
4	11	18	100	86	33	122	87	53	29	18	8.1	15
5	10	16	89	90	32	125	83	42	21	19	8.0	15
6	11	16	74	71	31	120	460	40	17	17	9.8	14
7	13	15	71	59	30	115	351	40	18	14	10	14
8	11	17	68	53	30	114	254	39	20	13	7.6	14
9	10	15	74	113	30	130	209	35	17	13	8.5	11
10	10	13	64	122	30	197	212	35	17	10	8.8	10
11	10	16	66	105	30	885	196	36	17	11	14	10
12	11	16	58	99	30	1,370	174	30	19	13	11	11
13	13	72	55	97	30	682	174	31	31	11	8.4	10
14	12	63	74	89	31	425	149	29	25	11	8.2	9.4
15	9.8	51	76	99	33	334	141	28	22	12	8.2	9.8
16	8.9	47	85	126	37	294	123	29	17	9.4	43	11
17	9.0	83	79	103	39	520	116	30	14	12	17	11
18	9.2	122	79	99	35	1,340	101	32	20	9.8	9.9	9.1
19	9.4	98	81	89	34	893	95	37	49	11	9.5	19
20	12	127	77	99	34	580	89	32	21	11	8.7	11
21	12	151	71	95	34	524	82	27	19	10	17	9.9
22	9.6	142	66	82	35	415	80	26	19	8.8	48	8.8
23	12	131	55	70	37	331	71	23	17	9.9	15	9.2
24	12	110	49	64	40	275	65	23	27	13	102	10
25	11	96	44	58	46	219	62	26	22	9.9	26	11
26	9.6	86	40	54	70	185	58	23	17	9.2	26	10
27	9.7	83	39	51	160	201	52	33	17	11	17	8.9
28	10	170	37	47	140	179	49	26	19	9.6	15	8.9
29	19	265	38	45	120	145	52	23	16	8.9	31	10
30	98	204	38	42	135	50	27	18	8.0	23	16	
31	35		39	40	126			26	7.9	19		
Month	Observed			Diversions		Corrected for diversion						
	Maximum	Minimum	Mean	(Mean)		Mean	Per square mile	Run-off in inches				
October.....	89	8.9	14.5	14.05		23.6	0.667	0.77				
November.....	265	13	77.2	8.78		86.0	2.00	2.23				
December.....	184	37	72.1	10.85		83.0	1.93	2.22				
January.....	163	40	80.2	12.97		93.2	2.17	2.50				
February.....	160	30	46.2	15.20		61.4	1.43	1.54				
March.....	1,370	114	365	5.87		371	8.65	9.97				
April.....	460	49	132	15.29		147	3.43	3.83				
May.....	53	23	33.2	15.98		49.2	1.15	1.33				
June.....	49	14	21.1	9.93		31.0	.723	.81				
July.....	24	7.8	12.2	6.24		18.4	.429	.49				
August.....	102	7.6	18.2	8.75		27.0	.629	.73				
September.....	17	8.8	11.8	8.64		20.4	.476	.53				
The year.....	1,370	7.6	74.0	11.03		85.0	1.98	26.95				

DELAWARE RIVER BASIN

Perkiomen Creek at Graters Ford, Pa.

Location.- Water-stage recorder, lat. 40°13'45", long. 75°27'10", 1,650 feet above highway bridge at Graters Ford, Montgomery County, and 2½ miles north of Collegeville. Zero of gage is 112.37 feet above mean sea level.

Drainage area.- 279 square miles.

Records available.- October 1931 to September 1936 in reports of U. S. Geological Survey; June 1914 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 12 years (1914-16, 1926-36), 423 second-feet.

Extremes.- Maximum discharge during year, 16,400 second-feet Jan. 3 (gage height, 11.40 feet) from rating curve extended above 12,000 second-feet; minimum, 12 second-feet Sept. 19, 30 (gage height, 0.86 foot); minimum daily discharge, 21 second-feet Sept. 20.

1914-36: Maximum discharge, 41,200 second-feet July 9, 1935 (gage height, 18.26 feet) from rating curve extended above 12,000 second-feet; minimum, 11 second-feet Sept. 25, 1932.

Remarks.- Records good except those for periods of ice effect, Dec. 24 to Jan. 2, Jan. 24 to Mar. 10, which are fair and were determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations in adjacent drainage areas. Some regulation from operation of mills upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	66	700	624	170	155	4,400	425	154	65	101	25	73
2	62	324	490	180	150	3,500	477	157	61	91	26	61
3	75	210	383	8,760	150	2,000	640	143	58	78	34	55
4	66	160	319	2,370	160	2,500	413	398	68	64	30	50
5	52	141	265	1,630	180	3,500	348	210	71	69	29	46
6	51	128	248	906	170	2,500	5,330	154	58	64	24	41
7	59	116	234	640	160	1,600	1,480	137	52	65	26	40
8	60	122	220	576	150	1,300	904	128	51	61	27	45
9	57	119	460	3,410	145	1,100	688	117	53	56	28	42
10	59	101	468	2,450	140	2,300	1,310	103	51	47	39	40
11	58	99	719	979	135	6,600	1,160	106	52	41	29	35
12	59	124	564	728	130	6,330	880	103	52	159	32	27
13	62	200	377	824	125	2,120	1,000	106	5,820	95	35	27
14	60	321	425	721	120	1,100	664	164	671	82	40	45
15	64	212	553	800	120	864	525	121	264	65	27	36
16	56	164	1,210	1,750	190	712	477	99	169	56	44	40
17	51	6,640	560	760	190	1,430	399	90	125	53	88	36
18	56	4,370	407	640	220	7,190	336	90	126	46	84	33
19	53	1,780	354	855	250	2,080	308	96	821	33	56	23
20	54	1,280	319	1,980	230	1,480	293	141	286	42	47	21
21	50	864	242	1,630	200	2,790	267	100	167	42	46	42
22	58	576	231	1,280	190	1,780	262	86	121	41	187	30
23	42	451	256	944	180	904	230	81	93	40	72	42
24	43	354	230	700	180	744	204	73	96	42	78	38
25	63	298	215	500	200	656	187	70	134	40	76	28
26	57	267	205	400	500	539	179	66	104	38	484	27
27	58	267	200	320	3,000	1,900	183	73	87	44	190	27
28	58	432	190	260	3,500	2,040	161	95	73	39	99	37
29	52	3,900	180	220	3,500	880	168	74	93	33	323	32
30	759	997	175	190		640	161	70	94	38	172	28
31	2,070		170	165		518		66		35	95	
Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches							
October	2,070	38	144	0.516	0.59							
November	6,640	99	962	3.09	3.45							
December	1,210	170	372	1.33	1.53							
January	8,760	165	1,217	4.36	5.03							
February	3,500	120	508	1.82	1.96							
March	7,190	518	2,193	7.86	9.06							
April	5,330	161	669	2.40	2.68							
May	398	66	118	.423	.49							
June	3,820	51	268	.961	1.07							
July	159	33	58.1	.208	.24							
August	484	24	83.6	.300	.35							
September	73	21	38.2	.137	.15							
The year	8,760	21	545	1.95	26.60							

DELAWARE RIVER BASIN

Crum Creek at Woodlyn, Pa.

Location.- Water-stage recorder, lat. 39°52'45", long. 75°21'0", at highway bridge at Woodlyn, Delaware County, 2 miles northeast of Chester and 2½ miles above mouth. Zero of gage is 19.58 feet above mean sea level.

Drainage area.- 33.3 square miles.

Records available.- October 1931 to September 1936 in reports of U. S. Geological Survey; June 1931 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Extremes.- Maximum discharge during year, 799 second-feet Jan. 9 (gage height, 5.08 feet); minimum, 1.0 second-foot Sept. 25 (gage height, 0.55 foot).

1931-36: Maximum discharge, 1,420 second-feet Aug. 23, 1933 (gage height, 7.56 feet) from rating curve extended above 550 second-feet; minimum, 0.3 second-foot Aug. 21, 1932 (gage height, 0.52 foot).

Remarks.- Records good except those for period of recorder failure and for periods of ice effect, which are poor. Discharge for period of recorder failure, Oct. 10-15, determined by comparison with records for stations in adjacent drainage areas. Discharge for periods of ice effect, Dec. 27 to Jan. 3, Jan. 23 to Feb. 25, determined from gage heights, weather records, two discharge measurements, and by comparison with records for stations mentioned above. Flow regulated by storage in Crum Creek Reservoir, 5 miles upstream. Water diverted from reservoir not included in records except in part of monthly table. Record of pumpage furnished by Philadelphia Suburban Water Co.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.7	45	39	25	35	177	70	46	22	9.6	3.3	5.1
2	27	26	43	45	35	109	84	43	11	7.8	2.9	3.3
3	15	20	33	500	37	127	104	51	5.6	7.9	2.5	5.3
4	19	18	51	184	42	132	74	89	13	8.3	2.9	15
5	12	17	18	89	40	113	61	57	22	11	2.5	4.4
6	9.0	21	26	70	38	83	254	44	13	9.2	3.8	3.3
7	27	15	15	65	36	57	141	39	6.5	7.0	5.6	5.0
8	11	26	29	63	36	46	106	38	8.3	15	2.9	15
9	12	15	43	373	35	48	72	36	8.3	4.1	2.3	1.9
10	12	15	36	244	35	57	112	30	9.2	1.3	2.1	4.4
11	14	18	58	97	34	205	128	30	11	2.5	2.3	4.1
12	20	22	46	82	34	317	102	31	28	9.7	1.9	3.1
13	15	21	38	75	38	125	105	32	33	8.6	2.1	2.9
14	15	22	37	70	43	75	83	58	28	4.7	2.3	2.5
15	17	15	37	78	44	63	79	20	20	4.1	1.9	2.7
16	20	15	54	102	45	60	96	24	17	3.8	2.7	2.7
17	29	348	31	77	47	75	66	23	9.6	3.5	4.7	4.4
18	16	243	26	75	80	418	58	35	14	3.3	2.7	9.0
19	6.6	90	32	134	60	234	62	24	75	3.1	2.3	8.3
20	5.4	64	40	89	45	126	63	47	27	4.1	2.3	5.9
21	5.4	49	40	58	43	198	80	15	22	4.4	2.5	5.0
22	5.8	44	16	59	41	192	60	13	11	3.8	4.8	16
23	13	42	12	51	40	84	35	15	5.9	3.8	3.3	3.6
24	29	39	29	47	39	91	53	20	22	8.1	2.7	1.4
25	13	26	45	45	110	88	45	32	22	5.4	3.2	1.1
26	7.0	21	50	43	386	84	54	12	14	3.5	5.0	1.3
27	9.7	26	30	41	294	159	52	20	6.7	3.3	3.5	1.3
28	6.8	39	25	39	240	196	49	24	14	10	3.5	1.4
29	10	140	24	38	210	106	52	12	24	33	13	3.2
30	123	62	23	37		88	49	7.0	10	17	5.0	5.4
31	79		25	36		87	9.2			5.2	3.5	
Month	Observed			Diversions		Corrected for diversions						
	Maximum	Minimum	Mean	(Mean)		Mean	Per square mile	Run-off in inches				
October	123	5.4	19.8	12.3		32.1	0.964	1.11				
November	348	15	52.1	12.1		64.2	1.93	2.15				
December	58	12	33.9	12.7		46.6	1.40	1.61				
January	500	25	97.8	13.1		111	3.33	3.84				
February	386	34	77.3	14.2		91.5	2.75	2.97				
March	418	46	130	13.7		144	4.32	4.98				
April	254	35	81.6	12.8		94.4	2.83	3.16				
May	89	7.0	31.5	14.0		45.5	1.37	1.58				
June	75	5.6	17.8	14.1		31.9	.958	1.07				
July	33	1.3	7.29	14.0		21.3	.640	.74				
August	15	1.9	3.42	13.3		16.7	.502	.58				
September	16	1.1	4.93	13.8		18.7	.562	.63				
The year	500	1.1	46.3	13.3		59.6	1.79	24.42				

DELAWARE RIVER BASIN

Ridley Creek at Moylan, Pa.

Location.- Water-stage recorder, lat. $39^{\circ}54'5''$, long. $75^{\circ}23'35''$, at Fox Bank Bridge, at Moylan, Delaware County, 1 mile south of Media. Zero of gage is 87.36 feet above mean sea level.

Drainage area.- 31.9 square miles.

Records available.- October 1931 to September 1936 in reports of U. S. Geological Survey; August 1931 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Extremes.- Maximum discharge during year, 1,950 second-feet Jan. 7 (gauge height, 5.85 feet) from rating curve extended above 300 second-feet; minimum, 2.6 second-feet Sept. 18 (gauge height, 0.51 foot); minimum daily discharge, 6.8 second-feet July 18.

1931-36: Maximum discharge, 3,990 second-feet July 9, 1935 (gage height, 7.81 feet) from rating curve extended above 300 second-feet; minimum, 1.6 second-feet Oct. 2, 1932; minimum daily discharge, 3.8 second-feet Sept. 14, 1932.

Remarks.—Records good except those for high stages and for periods of recorder failure or ice effect, which are fair. Discharge for periods of ice effect, Dec. 25 to Jan. 2, Jan. 25 to Feb. 13, determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations in adjacent drainage areas. Discharge for periods of recorder failure, June 7-19, Aug. 11 to Sept. 1, determined by comparison with records for stations mentioned above. Flow regulated by storage reservoir of Media Water Co., which diverts about 1.08 second-feet daily to supply borough of Media.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	27	47	51	34	42	183	79	54	28	25	13	16		
2	31	37	48	45	44	123	89	52	27	21	13	14		
3	27	33	45	1,020	46	150	98	58	26	20	12	14		
4	29	31	43	123	50	157	77	85	26	21	13	13		
5	26	31	40	95	49	135	75	57	26	22	13	13		
6	30	29	41	72	43	91	286	52	25	20	19	12		
7	33	34	39	68	45	67	119	49	23	18	24	12		
8	28	39	44	73	43	59	92	47	23	18	18	13		
9	25	31	53	622	42	61	94	45	24	16	13	12		
10	25	29	45	161	41	72	121	43	25	18	13	11		
11	28	30	70	89	41	256	135	44	23	25	13	11		
12	42	33	52	81	41	401	98	43	23	31	12	12		
13	29	33	47	74	44	125	113	47	43	20	12	9.6		
14	27	32	47	71	54	89	86	52	35	17	11	10		
15	27	29	48	76	54	78	81	42	30	16	11	10		
16	25	28	55	118	56	83	80	40	25	13	12	10		
17	26	489	45	76	58	118	74	40	22	11	13	9.6		
18	27	187	44	76	107	573	71	39	25	6.8	11	21		
19	25	90	42	117	76	187	70	43	45	7.1	11	29		
20	25	66	41	79	54	134	68	39	31	16	10	17		
21	25	54	36	65	47	222	68	35	27	17	11	22		
22	25	50	37	61	44	148	64	35	22	18	21	14		
23	26	47	39	56	44	103	63	34	20	14	30	15		
24	27	44	38	51	44	96	61	33	32	23	17	12		
25	25	42	37	49	143	91	59	31	30	19	15	13		
26	24	42	36	47	501	86	60	30	23	15	35	10		
27	24	41	35	46	321	181	60	37	22	16	22	10		
28	25	60	34	45	262	176	56	33	35	38	17	13		
29	25	147	33	44	247	101	57	30	30	25	70	9.8		
30	141	58	33	43		90	54	30	26	19	35	15		
31	108		35	43		84		30		14	20			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October.....					141		24		33.5		1.05		1.21	
November.....					489		28		64.8		2.03		2.26	
December.....					70		33		43.0		1.35		1.56	
January.....					1,020		34		120		3.76		4.34	
February.....					501		41		92.5		2.90		3.13	
March.....					573		59		146		4.58		5.28	
April.....					286		54		86.9		2.72		3.04	
May.....					85		30		42.9		1.34		1.54	
June.....					45		20		27.6		.865		.97	
July.....					39		6.8		18.7		.586		.68	
August.....					70		10		18.1		.567		.66	
September.....					29		9.6		13.4		.420		.47	
The year.....					1,020		6.8		58.9		1.85		25.13	

Chester Creek near Chester, Pa.

Location.- Water-stage recorder, lat. 39°52'10", long. 75°24'30", at Dutton Mill Bridge, 3 miles northwest of Chester, Delaware County. Zero of gage is 23.54 feet above mean sea level.

Drainage area.- 61.1 square miles.

Drainage area: 61.1 square miles.
Records available. - October 1931 to September 1936 in reports of U. S. Geological Survey; August 1931 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Extremes.— Maximum discharge during year, 3,620 second-feet Jan. 9 (gage height, 10.50 feet) from rating curve extended above 800 second-feet; minimum, 8.2 second-feet Sept. 26 (gage height, 0.50 foot); minimum daily discharge, 16 second-feet Sept. 15. 17.

1931-36: Maximum discharge, 4,270 second-foot Aug. 23, 1933 (gage height, 11.48 feet) from rating curve extended above 800 second-foot; minimum, 0.3 second-foot Aug. 7, 1934 (gage height, 0.28 foot); minimum daily discharge

Remarks. - Records good except those for extremely high stages and for periods of ice effect, which are fair. Discharge for periods of ice effect, Dec. 24 to Jan. 2, Jan. 23 to Feb. 19, determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations in adjacent drainage areas. Regulation from operation of mills upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	32	78	81	47	71	270	118	89	48	38	26	28		
2	48	62	71	60	70	170	139	88	47	38	26	26		
3	42	53	61	1,680	72	300	158	92	44	37	24	25		
4	39	45	65	243	84	208	119	173	44	39	24	24		
5	36	45	59	179	78	168	113	105	45	41	23	21		
6	43	45	61	124	74	123	595	91	43	36	30	21		
7	50	55	58	116	73	97	204	86	39	33	61	21		
8	42	65	64	114	77	87	153	83	39	32	31	19		
9	40	52	80	1,230	77	92	155	80	42	29	26	22		
10	40	49	70	329	74	113	215	76	44	28	25	21		
11	40	48	123	149	73	648	259	74	42	36	24	17		
12	72	59	88	127	73	710	173	74	61	69	23	19		
13	44	56	69	120	72	211	203	74	82	36	21	19		
14	43	59	71	109	120	143	148	84	60	33	22	17		
15	43	49	71	150	115	125	138	71	53	31	20	16		
16	37	45	86	201	115	120	136	68	47	27	23	17		
17	38	875	71	120	150	194	122	66	42	24	24	16		
18	39	363	66	136	220	750	116	65	48	23	20	26		
19	40	143	64	230	150	267	114	78	102	25	20	45		
20	39	116	62	138	131	190	111	70	61	31	20	25		
21	37	83	51	108	104	358	110	62	46	36	20	36		
22	39	76	58	98	82	203	104	58	37	28	48	26		
23	42	70	54	93	81	143	102	57	37	28	68	22		
24	44	70	53	88	77	138	101	56	54	59	29	22		
25	38	63	52	86	512	132	98	54	60	43	29	19		
26	40	62	51	82	974	123	99	51	47	31	70	17		
27	37	57	50	80	641	325	97	57	37	28	39	21		
28	37	82	49	78	484	314	96	56	56	31	34	20		
29	37	304	48	76	436	156	96	51	57	43	142	18		
30	243	96	47	74		135	93	49	48	46	58	21		
31	156		48	72		128		50		29	31			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October.....					243		32		51.5		0.843		0.97	
November.....					875		45		111		1.82		2.03	
December.....					123		47		64.6		1.06		1.22	
January.....					1,680		47		211		3.45		3.98	
February.....					974		70		185		3.03		3.27	
March.....					750		87		230		3.76		4.34	
April.....					595		93		150		2.45		2.73	
May.....					173		49		73.8		1.21		1.40	
June.....					102		37		50.4		.825		.92	
July.....					69		23		35.1		.574		.66	
August.....					142		20		34.9		.571		.66	
September.....					45		16		22.0		.360		.40	
The year.....					1,680		16		101		1.65		22.58	

White Clay Creek near Newark, Del.

Location.- Water-stage recorder, lat. 39°42'0", long. 75°41'5", at Baltimore & Ohio Railroad bridge $\frac{3}{4}$ miles east of Newark, New Castle County. Zero of gage is about 12 feet above mean sea level.

Drainage area,- 87.8 square miles.

Records available.- November 1931 to September 1936 (discontinued).

Extremes.- Maximum discharge during year, 6,030 second-feet Jan. 3 (gage height, 15.0 feet, from extension of recorder graph) from rating curve extended above 2,000 second-feet; minimum, 19 second-feet Sept. 15 (gage height, 3.80 feet); minimum daily discharge, 27 second-feet Sept. 17.

1931-36: Maximum discharge, 6,830 second-feet Aug. 23, 1933 (gage height, 16.05 feet, from floodmark) from rating curve extended above 2,000 second-feet; minimum, 9.1 second-feet Sept. 18, 1932 (gage height, 3.71 feet); minimum daily discharge, 12 second-feet Sept. 18, 26, 1932.

Remarks.—Records good except those for high stages and for periods of ice effect, which are fair. Discharge for periods of ice effect, Dec. 25 to Jan. 2, Jan. 23 to Feb. 25, determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations in adjacent drainage areas. Regulation at low stages from operations of mills upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	61	94	119	84	107	303	144	113	70	60	39	34
2	76	80	110	110	106	195	162	113	69	58	38	34
3	66	74	103	3,930	105	314	192	118	68	56	37	39
4	61	70	98	423	125	238	146	241	70	62	36	36
5	59	68	90	328	135	200	140	135	69	84	36	32
6	66	66	92	205	130	160	836	116	65	63	45	31
7	78	74	90	183	123	130	243	110	63	53	122	30
8	65	94	107	177	115	119	198	107	63	50	50	30
9	63	72	133	2,130	120	126	178	104	63	48	41	29
10	63	68	108	448	150	143	255	99	61	46	39	29
11	66	74	343	208	125	1,380	293	99	64	61	37	28
12	103	78	157	183	120	1,170	196	100	84	46	39	31
13	70	81	126	175	115	269	202	102	129	44	37	32
14	68	111	126	164	180	182	170	112	84	45	35	29
15	65	80	126	237	200	166	162	98	73	42	34	28
16	61	74	146	320	210	155	159	94	66	38	39	29
17	61	1,790	114	173	250	222	146	93	63	38	36	27
18	62	781	107	175	330	1,090	142	98	69	38	31	30
19	61	175	105	338	250	264	139	116	77	38	31	40
20	61	152	102	202	200	222	137	98	73	62	32	30
21	59	128	111	171	220	550	133	88	61	63	32	41
22	61	115	138	144	190	254	128	86	54	46	76	36
23	63	107	103	135	160	186	126	86	54	42	60	32
24	74	98	94	130	150	178	125	83	79	128	38	32
25	62	97	90	125	800	170	121	79	85	86	34	30
26	59	94	87	120	1,820	157	125	76	63	49	48	28
27	58	94	85	117	888	355	121	86	58	51	37	28
28	59	121	83	114	594	369	120	80	73	54	37	29
29	59	436	82	112	470	184	118	74	68	46	65	28
30	314	144	82	110	166	166	116	76	60	53	63	34
31	108		88	108		155		73		42	40	
Month					Maximum		Minimum		Mean		Per square mile	Run-off in inches
October.....					314		58		74.6		0.850	0.98
November.....					1,790		66		186		2.12	2.36
December.....					343		82		114		1.30	1.50
January.....					3,930		84		374		4.26	4.91
February.....					1,820		105		292		3.33	3.59
March.....					1,380		119		315		3.59	4.14
April.....					836		116		182		2.07	2.31
May.....					241		73		102		1.16	1.34
June.....					129		54		69.9		.796	.89
July.....					128		38		54.6		.622	.72
August.....					122		31		44.0		.501	.58
September.....					41		27		31.5		.359	.40
The year.....					3,930		27		153		1.74	23.72

Brandywine Creek at Chadds Ford, Pa.

Location.— Water-stage recorder, lat. 39°52'10", long. 75°35'35", at Pennsylvania Railroad bridge at Chadds Ford, Delaware County. Zero of gage is 150.19 feet above mean sea level.

Drainage area.- 287 square miles.

Records available. - October 1918 to September 1921, October 1931 to September 1936 in reports of U. S. Geological; August 1911 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 25 years, 378 second-feet.

Extremes.—Maximum discharge during year, 11,500 second-feet Jan. 3 (gage height, 11.21 feet) from rating curve extended above 7,000 second-feet; minimum, 59 second-feet Sept. 25, 26 (gage height, 0.52 foot); minimum daily discharge, 99 second-feet Sept. 28.

1911-36: Maximum discharge, 30,500 second-feet Mar. 5, 1920 (gage height, 15.0 feet, from floodmark) from rating curve extended above 7,000 second-feet; minimum, 18 second-feet Jan. 22, 1931 (gage height, 0.34 foot); minimum daily discharge, 50 second-feet Sept. 11, 13, 23, 1932.

Remarks.- Records good except those for periods of recorder failure or ice effect, which are fair. Discharge for period of recorder failure, Dec. 5-7, determined by comparison with records for stations in adjacent drainage areas. Discharge for periods of ice effect, Dec. 26 to Jan. 2, Jan. 24 to Feb. 4, Feb. 10-15, determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations mentioned above. Regulation at low stages from operation of mills upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	207	369	447	280	350	1,800	761	510	264	231	133	146
2	235	280	415	350	340	1,130	324	502	258	209	128	133
3	213	244	386	6,190	350	1,210	952	526	248	200	124	138
4	201	229	369	2,640	400	1,440	740	1,000	306	206	120	131
5	192	222	350	1,380	433	1,260	698	597	271	212	116	123
6	207	213	360	900	422	876	2,320	510	244	194	144	121
7	222	229	350	698	383	655	1,410	479	235	180	231	114
8	204	254	362	655	436	575	952	460	231	171	146	118
9	198	226	496	2,750	422	595	888	441	231	165	136	120
10	195	207	455	2,800	400	765	1,150	422	231	160	123	115
11	201	216	555	1,040	390	2,030	1,090	418	244	160	120	111
12	264	248	515	810	380	4,150	952	414	709	154	121	116
13	213	308	411	783	390	1,550	1,040	414	359	184	120	111
14	201	577	429	765	400	996	866	491	366	150	114	111
15	201	296	447	882	450	866	903	418	302	151	109	107
16	189	251	615	1,290	515	782	903	388	254	135	136	112
17	136	2,540	433	765	492	896	740	377	228	133	136	106
18	189	3,270	397	720	765	3,100	719	373	248	130	122	114
19	186	968	383	941	513	1,790	698	430	302	134	107	121
20	183	635	369	698	496	1,310	678	399	298	167	108	109
21	177	515	283	595	451	1,840	658	355	241	182	108	125
22	183	447	370	595	380	1,530	637	337	209	153	244	120
23	192	404	342	489	335	1,020	617	326	200	142	176	111
24	213	376	325	450	338	952	597	323	295	205	146	109
25	192	359	296	430	1,010	910	577	309	334	192	134	106
26	183	352	290	410	3,120	866	577	292	238	152	360	101
27	171	345	270	400	2,700	1,290	557	302	206	152	194	100
28	171	391	260	390	2,340	1,510	557	312	290	206	150	99
29	190	1,340	255	380	2,060	974	557	285	330	243	601	102
30	1,230	577	250	370		866	538	273	238	196	356	105
31	656		290	360		824		275		141	172	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					1,230	171	246	0.957		0.99		
November					3,270	207	563	1.96		2.19		
December					615	250	380	1.32		1.52		
January					6,190	280	1,089	3.58		4.17		
February					3,120	335	740	2.58		2.79		
March					4,150	575	1,303	4.54		5.23		
April					2,320	538	632	2.90		3.24		
May					1,000	275	418	1.46		1.68		
June					708	200	283	.996		1.10		
July					243	150	173	.603		.70		
August					601	107	169	.589		.68		
September					146	99	115	.401		.45		
The year					6,190	99	521	1.92		24.73		

North Branch of Susquehanna River at Binghamton, N. Y.

Location.- Chain gage, lat. 42°5'30", long. 75°54'55", at Washington Street Bridge, at Binghamton, Broome County, 500 feet upstream from mouth of Chenango River. Zero of gage is 821.49 feet above mean sea level.

Drainage area.- 2,290 square miles.

Records available.- July 1901 to December 1912, January 1915 to September 1936.

Extremes.- Maximum gage height observed during year, 22.85 feet Mar. 18; minimum, 1.69 feet Aug. 1.

1901-12, 1915-36: Maximum gage height, that of Mar. 18, 1936; minimum, 1.5 feet Sept. 20, 1908.

Maximum stage known, 23.5 feet Mar. 17, 1865.

Remarks.- Records good. Gage heights are obtained at this station for flood-warning purposes. Discharge is not determined.

SUSQUEHANNA RIVER BASIN

Daily mean gage height in feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.77	10.00	5.01	3.76	4.50	3.94	5.50	3.28	2.46	1.96	1.76	2.10
2	1.99	6.60	4.61	3.70	4.20	3.80	5.33	3.24	2.46	1.98	1.85	2.21
3	1.96	4.70	4.25	3.28	3.87	3.30	6.28	3.42	2.38	2.00	1.82	1.99
4	2.02	3.87	4.03	3.77	3.76	3.20	6.12	4.10	2.37	1.96	1.82	2.05
5	2.03	3.46	3.75	4.13	3.79	3.75	5.40	3.94	2.32	1.95	1.74	2.05
6	2.02	3.92	3.37	4.06	3.62	3.79	5.62	3.45	2.27	1.94	1.86	2.00
7	2.00	4.06	3.15	3.70	3.62	3.88	7.02	3.22	2.22	2.04	1.96	2.02
8	1.91	4.00	3.37	3.49	3.49	3.66	6.76	3.20	2.15	1.91	2.02	1.94
9	1.90	4.12	3.75	3.38	3.48	3.52	6.14	3.24	2.14	1.98	2.02	2.00
10	1.88	3.80	4.85	3.34	3.42	4.70	5.94	3.12	2.18	2.00	2.06	1.97
11	1.93	3.60	4.69	3.37	3.46	8.90	6.09	2.96	2.20	1.92	2.08	1.90
12	1.95	3.55	4.24	3.33	3.41	15.50	6.12	2.84	2.20	1.92	1.99	1.96
13	2.04	9.10	3.97	3.33	3.36	16.90	7.68	2.83	2.14	1.92	1.96	1.94
14	2.08	12.90	4.29	3.38	3.39	13.31	7.52	2.83	2.14	1.90	1.90	1.90
15	2.06	11.00	5.23	3.22	3.38	9.95	7.01	2.99	2.15	1.84	2.06	2.00
16	2.00	8.00	5.53	3.78	3.34	11.50	6.56	3.00	2.14	1.78	2.00	1.95
17	1.96	5.95	5.17	3.98	3.19	15.55	6.00	2.33	2.12	1.86	1.92	1.93
18	2.03	5.14	4.51	3.63	3.16	21.10	5.53	2.78	2.12	1.85	2.04	1.90
19	2.04	5.12	4.13	3.42	3.18	21.90	5.20	2.76	2.22	1.82	2.06	2.34
20	2.02	5.77	3.97	3.12	3.18	18.60	4.91	3.20	2.20	1.82	2.38	2.50
21	2.04	6.29	3.79	3.24	3.10	14.90	4.64	3.26	2.48	1.80	2.21	2.24
22	2.02	5.73	3.55	3.47	3.07	12.86	4.90	3.12	2.24	1.85	2.38	2.14
23	1.98	5.11	3.14	3.75	3.10	10.43	4.64	2.86	2.14	1.82	2.20	2.05
24	2.01	4.61	3.60	4.49	2.99	8.60	4.29	2.67	2.08	1.88	2.17	2.06
25	2.12	4.20	3.68	5.16	2.66	8.00	3.99	2.66	2.08	1.88	2.20	1.98
26	2.08	3.95	3.44	4.20	2.70	7.55	3.79	2.61	2.08	1.82	2.12	2.00
27	2.08	3.90	3.50	4.22	3.17	7.00	3.58	2.64	2.04	1.85	2.13	1.96
28	2.04	4.04	3.68	4.02	3.84	7.46	3.48	2.56	2.02	1.81	2.09	1.91
29	2.04	5.42	4.07	3.74	3.35	6.82	3.36	2.55	1.99	1.79	2.05	1.94
30	2.12	5.75	4.13	3.84		5.92	3.32	2.52	1.99	1.76	2.08	2.00
31	8.40		4.12	3.84		5.67		2.49		1.76	2.02	

SUSQUEHANNA RIVER BASIN

North Branch of Susquehanna River at Towanda, Pa.

Location.— Wire-weight gage, lat. 41°45'55", long. 76°26'25", at Bridge Street Bridge, at Towanda, Bradford County. Zero of gage is 693.85 feet above mean sea level.

Drainage area.— 7,797 square miles.

Records available.— October 1918 to October 1920, October 1931 to September 1936 in reports of U. S. Geological Survey; December 1892 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.— 18 years (1918-36), 10,020 second-feet.

Extremes.— Maximum discharge during year, 188,000 second-feet Mar. 19 (gage height, 25.03 feet); minimum, 560 second-feet July 22, Aug. 3 (gage height, -0.08 foot). 1892-1936: Maximum discharge, that of Mar. 19, 1936; minimum, 538 second-feet Dec. 3, 1930 (gage height, -0.15 foot); minimum daily discharge, 560 second-feet Aug. 3, 1936.

Remarks.— Records good except those for periods of ice effect, Dec. 5-9, Dec. 24 to Jan. 6, Jan. 20 to Mar. 6, which are fair and were determined from gage heights, weather records, and by comparison with records for stations upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,720	36,200	15,700	4,600	4,200	14,000	26,000	8,200	3,360	1,210	580	1,370
2	1,920	27,200	12,700	4,800	4,000	12,300	22,400	8,200	3,210	1,060	580	1,370
3	2,380	15,700	10,700	5,200	3,900	11,600	28,400	9,400	3,060	1,210	560	1,370
4	2,640	11,200	9,400	6,000	3,850	11,500	25,400	16,200	2,780	1,290	580	1,290
5	2,580	8,600	6,700	7,600	3,800	11,700	21,800	13,700	2,640	1,210	610	1,140
6	2,260	7,410	6,000	14,000	3,700	13,000	21,200	11,700	2,380	1,140	875	1,140
7	2,030	9,400	5,500	11,700	3,650	15,700	30,800	9,800	2,140	1,060	995	995
8	1,920	9,400	5,400	9,800	3,600	14,600	29,000	9,000	2,140	1,060	1,290	995
9	1,820	10,200	5,500	9,000	3,550	13,700	25,400	8,200	2,140	1,060	1,140	930
10	1,720	9,400	14,700	8,600	3,500	19,700	23,000	7,800	2,050	930	1,060	875
11	1,630	8,200	16,700	8,200	3,400	44,000	23,600	7,020	2,030	995	2,250	875
12	1,630	8,200	14,200	8,200	3,400	133,000	27,200	6,250	2,920	930	1,920	875
13	1,630	16,900	12,200	7,410	3,400	137,000	32,600	5,890	3,360	875	1,540	875
14	1,370	57,100	13,700	7,020	3,400	85,900	36,200	6,250	2,780	820	1,210	820
15	1,540	50,800	20,700	7,020	3,500	61,900	31,400	6,630	2,380	875	1,460	820
16	1,460	37,400	27,200	7,410	3,350	73,800	28,400	6,630	2,140	820	1,370	875
17	1,370	23,600	26,000	8,200	3,250	115,000	24,200	5,890	1,820	720	1,210	995
18	1,370	18,200	18,700	8,600	3,750	164,000	20,700	5,160	1,820	680	995	875
19	1,290	16,700	15,200	7,020	3,600	182,000	18,700	5,520	3,660	720	930	820
20	1,290	16,700	13,200	6,000	3,500	158,000	17,200	8,600	3,210	680	3,850	1,540
21	1,290	22,400	11,200	5,100	3,400	116,000	15,700	9,000	2,510	640	3,360	2,030
22	1,290	20,200	8,200	6,400	3,300	83,300	15,700	7,200	2,510	580	3,210	1,540
23	1,290	16,700	7,020	6,000	3,200	61,300	15,700	6,630	2,030	610	2,780	1,290
24	1,370	13,700	6,300	5,700	3,100	47,400	13,700	5,280	1,720	680	3,510	1,140
25	1,290	11,200	5,700	5,400	3,100	49,100	11,700	5,160	1,540	680	2,380	1,140
26	1,370	9,800	5,300	5,100	3,500	53,600	10,700	4,470	1,460	680	2,140	995
27	1,460	9,000	5,100	4,900	5,500	43,400	9,800	4,470	1,460	680	1,630	930
28	1,370	9,000	4,900	4,700	10,000	43,100	9,000	4,300	1,460	640	1,460	875
29	1,370	11,700	4,700	4,500	12,000	36,900	8,200	4,140	1,290	680	1,540	820
30	3,210	16,700	4,600	4,400		29,700	8,200	3,820	1,290	640	1,630	820
31	8,230	4,500	4,300			27,900		3,660		610	1,540	
Month	Maximum		Minimum		Mean		Per square mile		Run-off in inches			
October	8,230		1,290		1,900		0.244		0.28			
November	57,100		8,200		17,960		2.30		2.57			
December	27,200		4,500		10,890		1.40		1.61			
January	14,000		4,300		6,867		.881		1.02			
February	12,000		3,100		4,117		.528		.57			
March	182,000		11,500		60,780		7.80		8.99			
April	36,200		8,200		21,070		2.70		3.01			
May	16,200		3,660		7,269		.932		1.07			
June	3,660		1,290		2,509		.296		.33			
July	1,290		580		854		.110		.13			
August	3,560		560		1,619		.208		.24			
September	2,030		820		1,091		.139		.16			
The year	182,000		560		11,440		1.47		19.98			

SUSQUEHANNA RIVER BASIN

North Branch of Susquehanna River at Wilkes-Barre, Pa.

Location.— Water-stage recorder, lat. 41°15'0", long. 75°53'10", at Market Street Bridge, at Wilkes-Barre, Luzerne County. Zero of gage is 511.94 feet above mean sea level.

Drainage area.— 9,960 square miles.

Records available.— March 1899 to December 1913, October 1918 to September 1921, October 1931 to September 1936 in reports of U. S. Geological Survey; November 1890 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.— 37 years (1899-1936), 13,540 second-feet.

Extremes.— Maximum discharge during year, 232,000 second-feet Mar. 20 (gage height, 33.07 feet); minimum, 1,150 second-feet Aug. 2, 3 (gage height, 1.25 feet). 1890-1936: Maximum discharge, that of Mar. 20, 1936; minimum, 820 second-feet Sept. 12, 16, 17, 20, 1913.

Remarks.— Records good except those for periods of ice effect, Dec. 25 to Jan. 1, Jan. 23 to Feb. 28, which are poor and were determined from gage heights, weather records, and by comparison with records for stations upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,020	18,000	20,600	5,000	5,700	17,700	33,000	10,100	4,300	2,020	1,180	2,170
2	2,020	38,300	18,100	5,580	5,600	16,100	29,200	9,800	4,180	1,950	1,180	2,020
3	2,160	24,100	15,000	6,120	5,400	14,500	29,800	9,800	3,800	1,880	1,150	1,950
4	2,300	16,000	12,900	8,080	5,500	12,900	32,500	11,500	3,680	1,820	1,180	1,880
5	2,600	11,900	11,000	9,200	5,200	14,000	28,200	16,900	3,440	1,820	1,180	1,820
6	2,840	10,400	9,500	11,500	5,100	17,600	28,200	14,600	3,110	1,820	1,290	1,820
7	2,680	9,500	8,560	21,300	5,000	30,100	32,000	12,900	3,000	1,750	1,290	1,630
8	2,600	10,400	7,800	12,200	4,900	17,700	37,100	11,300	2,800	1,750	1,330	1,580
9	2,450	11,000	7,800	11,000	4,750	17,100	33,600	10,100	2,600	1,690	1,470	1,580
10	2,300	11,000	10,400	11,600	4,700	19,900	30,300	9,500	2,600	1,630	1,630	1,470
11	2,230	10,400	17,100	11,000	4,600	48,800	29,200	8,910	2,600	1,630	1,750	1,470
12	2,020	9,200	18,100	10,700	4,500	129,000	31,400	8,040	2,800	1,580	1,690	1,420
13	2,160	18,900	15,400	10,400	4,400	182,000	34,700	7,340	2,800	1,470	2,600	1,580
14	2,020	58,600	14,600	10,100	4,300	150,000	45,200	6,820	3,560	1,520	2,330	1,580
15	2,020	68,100	20,000	9,800	4,500	99,400	41,500	7,060	3,560	1,470	2,550	1,580
16	1,890	53,800	26,700	12,200	4,200	80,200	37,100	7,480	3,220	1,380	1,950	1,380
17	1,770	38,100	33,000	11,600	4,400	125,000	32,000	7,340	2,900	1,380	1,950	1,330
18	1,890	25,700	25,700	10,700	4,400	192,000	27,200	6,550	2,700	1,330	1,880	1,330
19	1,830	21,000	19,700	11,000	4,200	229,000	23,000	6,520	3,000	1,290	1,750	1,380
20	1,720	20,600	16,900	9,500	4,000	221,000	21,500	6,650	3,440	1,250	1,630	1,380
21	1,660	26,700	14,000	5,130	3,900	184,000	19,700	9,310	6,780	1,250	2,280	1,330
22	1,720	27,700	12,200	4,310	4,100	144,000	18,900	10,100	4,940	1,250	4,240	1,680
23	1,770	23,800	10,100	7,400	3,900	99,000	18,500	8,620	3,680	1,220	3,560	2,170
24	1,770	19,300	8,080	7,100	3,800	72,300	17,700	7,620	3,440	1,250	3,680	1,880
25	1,720	15,700	7,000	6,900	3,700	59,000	15,700	6,780	3,110	1,220	3,920	1,690
26	1,720	13,600	6,000	6,700	4,200	63,500	14,000	6,110	2,700	1,220	3,560	1,520
27	1,720	12,200	5,500	6,400	6,000	62,200	12,600	5,580	2,420	1,220	2,900	1,520
28	1,720	12,900	5,200	6,200	12,000	52,800	11,600	5,450	2,330	1,220	2,510	1,470
29	1,770	20,200	5,000	6,000	15,000	51,700	10,700	5,190	2,250	1,220	2,420	1,520
30	2,250	18,900	4,900	5,900		41,200	10,100	4,930	2,100	1,180	2,250	1,520
31	6,650		4,900	5,800		33,900		4,680		1,180	2,100	
Month	Maximum		Minimum		Mean		Per square mile		Run-off in inches			
October	6,650		1,660		2,193		0.220		0.25			

SUSQUEHANNA RIVER BASIN

North Branch of Susquehanna River at Danville, Pa.

Location.- Wire-weight gage, lat. 40°57'25", long. 76°37'20", at highway bridge at Danville, Montour County. Zero of gage is 431.07 feet above mean sea level.

Drainage area.- 11,220 square miles.

Records available.- March 1899 to December 1913, October 1918 to September 1921, July 1932 to September 1936 in reports of U. S. Geological Survey; March 1899 to December 1903, March 1905 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 33 years (1899-1900, 1901-3, 1905-31, 1932-36), 15,200 second-feet.

Extremes.- Maximum discharge during year, 250,000 second-feet Mar. 20; maximum gage height, 28.00 feet Mar. 19 (affected by backwater); minimum discharge, 1,020 second-feet Aug. 3 (gage height, 1.84 feet).

1899-1936: Maximum discharge, that of Mar. 20, 1936; maximum gage height, 30.7 feet, from floodmarks, Mar. 9, 1904 (affected by ice); minimum discharge, 830 second-feet Sept. 23-25, 1900 (gage height, 1.6 feet).

Remarks.- Records good except those for days of missing gage heights and for period of backwater effect, which are fair, and those for periods of ice effect, which are poor. Discharge for days of missing gage heights, Oct. 9, Nov. 28, Dec. 5, 14, 23, Jan. 18, 20, 21, Apr. 3, 16, 18, May 20, 29, June 18, July 12, 17, Aug. 6, 10, and for period of backwater effect, Mar. 18, 19, determined by comparison with records for station at Wilkes-Barre. Discharge for periods of ice effect, Dec. 25 to Jan. 1, Jan. 22 to Mar. 6, determined from gage heights, weather records, and by comparison with records for stations upstream. Discharge for extremely high stages determined from graph based on twice-daily gage readings.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	2,120	9,360	28,900	5,600	6,400	27,000	33,900	10,700	5,180	2,820	1,100	2,530		
2	2,120	32,500	25,500	6,780	6,300	30,000	34,600	10,700	4,800	2,680	1,100	2,530		
3	2,120	33,200	20,600	8,480	6,100	25,000	37,000	10,700	4,430	2,530	1,020	2,390		
4	2,250	21,200	18,300	11,200	6,000	22,000	34,600	10,700	4,430	2,390	1,100	2,250		
5	2,390	15,100	15,500	13,600	5,800	30,000	33,200	15,600	4,430	2,390	1,100	2,120		
6	2,820	10,300	13,100	14,600	5,700	42,000	33,900	17,200	3,920	2,250	1,100	2,120		
7	2,970	10,700	10,700	24,200	5,600	54,500	40,800	15,100	3,590	2,250	1,100	1,980		
8	2,820	9,810	9,810	17,800	5,400	26,500	43,300	13,100	3,590	2,120	1,290	1,860		
9	2,650	11,600	9,810	14,600	5,300	23,500	40,800	12,600	3,430	1,980	1,200	1,730		
10	2,530	10,300	15,600	16,700	5,200	26,500	37,700	10,700	3,280	1,980	1,600	1,730		
11	2,530	11,600	23,000	16,100	5,100	52,600	35,400	9,810	3,280	2,120	1,860	1,620		
12	2,390	10,700	20,600	14,600	5,000	134,000	36,100	9,360	3,590	2,000	1,980	1,620		
13	2,250	13,100	20,600	13,600	4,800	186,000	38,400	8,480	3,920	1,730	1,860	1,500		
14	2,250	48,400	19,000	13,600	4,700	179,000	39,200	7,620	3,750	1,730	2,820	1,500		
15	2,120	73,400	21,800	13,100	4,800	125,000	50,100	7,620	4,430	1,730	2,820	1,400		
16	2,120	63,600	30,300	15,600	4,500	91,200	44,000	8,050	4,080	1,620	2,820	1,290		
17	1,980	48,400	38,400	16,700	4,700	113,000	40,000	8,050	3,750	1,600	2,390	1,400		
18	1,980	35,400	36,900	16,000	4,800	190,000	32,000	8,050	4,100	1,500	2,120	1,400		
19	1,980	25,500	28,200	14,600	4,600	241,000	26,200	7,200	4,430	1,500	2,120	1,290		
20	1,980	24,200	22,400	11,000	4,400	245,000	25,500	7,600	4,080	1,400	1,980	1,400		
21	1,980	27,500	19,400	8,200	4,300	210,000	23,600	8,050	4,800	1,290	2,250	1,400		
22	1,730	33,900	17,200	6,000	4,300	157,000	21,200	10,700	7,200	1,290	2,820	1,400		
23	1,860	31,000	14,000	8,500	4,200	116,000	20,600	10,300	4,800	1,290	4,800	1,500		
24	1,860	25,500	12,100	8,100	4,200	88,500	20,600	8,820	4,430	1,200	4,080	2,390		
25	1,730	21,200	9,800	7,900	4,200	67,900	18,300	8,050	4,080	1,290	4,080	2,120		
26	1,730	19,400	8,500	7,700	4,700	66,200	16,100	7,200	3,750	1,290	4,430	1,860		
27	1,730	15,600	7,400	7,500	6,800	70,400	14,600	6,780	3,430	1,200	3,920	1,730		
28	1,730	17,500	6,600	7,200	15,000	61,200	13,100	6,370	2,820	1,200	3,280	1,620		
29	1,860	26,900	6,000	7,000	21,500	52,200	12,100	6,200	2,970	1,200	3,120	1,620		
30	2,530	26,900	5,700	6,800	49,500	49,500	11,600	5,570	2,970	1,200	2,970	1,730		
31	3,280		5,500	6,600		40,100		5,180		1,100	2,680			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October					3,280		1,730		2,206		0.197		0.23	
November					73,400		9,360		25,460		2.27		2.53	
December					38,400		5,500		17,460		1.56		1.80	
January					24,200		5,600		11,610		1.03		1.19	
February					21,500		4,200		6,014		.536		.58	
March					245,000		23,500		91,900		8.19		9.44	
April					50,100		11,600		30,280		2.70		3.01	
May					17,200		5,180		9,428		.840		.97	
June					7,200		2,820		4,058		.362		.40	
July					2,820		1,100		1,738		.155		.18	
August					4,800		1,020		2,352		.210		.24	
September					2,530		1,290		1,768		.158		.18	
The year					245,000		1,020		17,100		1.52		20.75	

SUSQUEHANNA RIVER BASIN

Susquehanna River at Sunbury, Pa.

Location.- Wire-weight gage, lat. 40°50'55", long. 76°48'20", at highway bridge at Sunbury, Northumberland County. Zero of gage is 419.00 feet above mean sea level.

Drainage area.- 18,300 square miles.

Records available.- August 1916 to September 1936.

Extremes.- Maximum gage height during year, 26.85 feet, from floodmark, Mar. 19; minimum, 0.50 foot Aug. 5.

1916-36: Maximum gage height, that of Mar. 19, 1936; minimum, 0.32 foot Sept. 25-27, 1932, at a site 3,700 feet upstream.

Remarks.- Records good. Gage heights for Mar. 19-23 determined from flood crest and comparison with stage graphs of nearby stations. Station is maintained for flood-warning purposes. Discharge is not determined.

Daily mean gage height in feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.75	1.84	3.80	1.84	2.80	6.42	5.77	2.62	1.64	1.13	0.56	1.24
2	.77	3.44	3.74	1.95	3.52	8.64	5.52	2.60	1.60	1.14	.54	1.33
3	.90	4.05	3.46	2.30	3.84	9.78	5.32	2.60	1.53	1.14	.56	1.23
4	.83	3.24	3.11	2.59	3.92	8.26	5.36	2.66	1.48	1.14	.55	1.08
5	.88	2.62	2.84	3.00	3.74	7.90	5.18	2.96	1.40	1.11	.51	1.00
6	.95	2.28	2.54	3.06	3.63	8.08	5.31	3.28	1.34	1.03	.53	.98
7	1.00	2.13	2.40	3.35	3.58	8.45	6.32	3.04	1.28	.97	.53	.90
8	.96	2.02	2.22	3.52	3.50	5.43	6.50	2.97	1.26	.94	.64	.86
9	.93	2.14	2.30	3.00	3.50	5.06	6.36	2.68	1.24	.90	.84	.80
10	.90	2.17	2.40	3.24	3.43	5.16	5.90	2.52	1.26	.84	.84	.76
11	.88	2.20	2.92	3.16	3.36	6.94	5.66	2.42	1.32	.80	.94	.70
12	.86	2.15	3.86	2.98	3.32	16.32	5.66	2.36	1.38	.86	.96	.68
13	.82	2.69	3.72	2.90	3.20	19.39	5.79	2.27	1.63	.78	.93	.64
14	.80	6.46	3.86	2.96	3.12	16.52	6.04	2.17	1.70	.79	1.00	.61
15	.81	7.52	4.31	2.84	3.09	12.08	6.30	2.12	1.64	.76	1.08	.60
16	.78	6.80	4.95	2.98	3.08	10.12	5.68	2.06	1.60	.72	1.08	.57
17	.75	5.64	5.68	3.21	3.04	12.98	5.32	2.06	1.55	.68	.98	.60
18	.75	4.70	5.64	3.06	3.26	20.32	4.90	2.04	1.50	.64	.84	.59
19	.73	4.06	4.90	2.95	3.18	25.82	4.54	2.00	1.58	.63	.89	.57
20	.72	3.76	4.31	2.80	3.02	22.67	4.22	2.04	1.73	.61	.86	.55
21	.71	4.00	3.97	2.54	3.06	18.19	4.00	2.13	1.71	.57	.80	.56
22	.74	4.34	3.51	2.38	3.04	14.56	3.82	2.38	1.96	.58	1.02	.58
23	.70	4.13	3.18	1.94	2.92	11.90	3.70	2.36	1.70	.57	1.29	.56
24	.70	3.72	2.74	1.86	2.85	9.77	3.64	2.18	1.53	.61	1.40	.74
25	.72	3.35	2.48	2.13	2.89	8.47	3.44	2.08	1.44	.58	1.36	.74
26	.71	3.03	2.44	2.17	2.84	8.43	3.24	2.01	1.34	.56	1.40	.68
27	.70	2.84	2.12	2.12	3.24	8.92	3.02	1.93	1.25	.58	1.33	.59
28	.71	2.74	2.42	2.22	4.07	8.42	2.88	1.86	1.16	.58	1.24	.58
29	.72	3.62	2.10	2.56	5.08	8.07	2.77	1.82	1.10	.59	1.21	.65
30	1.03	3.98	2.02	2.57		7.22	2.67	1.76	1.11	.60	1.24	.68
31	1.66		1.84	2.50		6.28		1.68		.56	1.23	

SUSQUEHANNA RIVER BASIN

Susquehanna River at Harrisburg, Pa.

Location.— Water-stage recorder, lat. 40°15'10", long. 76°52'30", at Nagle Street, 500 feet above sanitary dam, and at Market Street Bridge, 3,700 feet above sanitary dam, and wire-weight gage at Walnut Street Bridge, 500 feet above Market Street, in Harrisburg, Dauphin County. Zero of gage is 290.04 feet above mean sea level.

Drainage area.— 24,100 square miles.

Records available.— October 1890 to September 1936.

Average discharge.— 46 years, 34,690 second-feet.

Extremes.— Maximum discharge during year, 740,000 second-feet Mar. 19 (Nagle Street gage height, 29.23 feet; Walnut Street gage height, 30.33 feet); minimum, 2,870 second-feet Sept. 19, 25 (Nagle Street gage height, 2.93 feet; Walnut Street gage height, 3.00 feet).

1890-1936: Maximum discharge, that of Mar. 19, 1936; minimum, 1,600 second-feet Nov. 29, 1930 (Nagle Street gage height, 2.48 feet; Walnut Street gage height, 2.56 feet).

Remarks.— Records excellent except those for extremely high stages and those for periods of ice effect, which are fair. Discharge for periods of ice effect, Dec. 24 to Jan. 18, Jan. 23 to Mar. 9, based on power-house records of Holtwood plant of Pennsylvania Water & Power Co.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,120	11,900	39,200	11,500	18,000	75,000	84,000	24,400	11,600	7,650	4,710	9,500
2	4,120	13,800	36,600	12,500	18,000	81,000	75,800	23,400	11,000	7,390	4,490	9,800
3	4,120	37,300	35,500	19,000	17,000	78,000	71,600	23,000	10,600	7,780	3,940	9,050
4	4,010	36,000	30,500	25,000	16,000	78,000	68,800	23,000	10,100	7,390	3,720	8,300
5	4,120	26,000	26,700	28,000	16,000	78,000	67,300	23,400	9,650	7,650	3,720	7,260
6	4,320	20,000	23,700	32,000	15,500	82,000	80,200	27,700	9,050	7,390	3,500	6,350
7	4,640	16,600	20,700	30,000	15,000	95,000	114,000	29,800	8,600	6,740	3,500	5,830
8	4,850	15,100	19,400	34,000	14,500	140,000	119,000	27,200	8,300	6,220	3,500	5,480
9	4,960	14,100	17,900	43,000	14,000	91,000	112,000	24,800	8,040	5,700	3,500	5,370
10	4,850	15,100	18,500	41,000	13,500	93,200	101,000	22,300	7,910	5,370	4,050	4,820
11	4,740	15,600	21,100	40,000	13,000	130,000	94,500	20,700	7,910	5,260	5,040	4,490
12	4,540	16,000	32,000	38,000	12,500	304,000	91,900	19,800	8,500	5,480	5,260	4,380
13	4,430	23,300	40,600	36,000	12,000	424,000	89,300	19,000	8,750	5,040	5,480	4,050
14	4,320	58,500	42,000	35,000	12,000	368,000	86,700	19,000	10,600	4,820	5,480	3,720
15	4,120	101,000	52,000	34,000	12,500	267,000	91,900	18,000	13,700	4,710	5,480	3,610
16	4,010	102,000	59,800	34,000	13,000	203,000	86,700	17,300	13,700	4,600	6,090	3,500
17	3,800	84,000	71,600	35,000	14,000	219,000	75,800	16,300	11,800	4,380	6,850	3,410
18	3,800	65,800	78,600	39,000	15,000	414,000	65,800	15,900	11,000	4,160	6,220	3,320
19	3,700	52,000	71,600	36,600	16,000	691,000	58,300	16,100	15,900	3,940	5,480	3,140
20	3,600	45,300	56,700	27,400	15,500	614,000	52,000	15,600	16,500	3,720	5,150	3,230
21	3,500	39,200	47,600	22,400	15,000	440,000	47,600	15,800	14,400	3,720	5,040	3,140
22	3,500	43,300	37,900	20,900	14,000	342,000	43,300	16,100	12,700	4,050	4,930	3,230
23	3,500	44,700	34,000	18,000	13,500	258,000	40,600	18,400	13,500	4,160	5,480	3,320
24	3,400	40,600	26,000	16,000	13,000	193,000	39,200	18,400	12,800	3,940	6,680	3,320
25	3,300	35,300	21,000	13,000	13,000	157,000	36,600	16,500	11,000	3,720	8,300	3,050
26	3,110	30,300	18,000	12,000	15,000	138,000	34,000	15,200	9,650	3,830	8,450	3,720
27	3,110	26,700	15,000	13,000	23,000	146,000	31,600	14,400	8,900	4,160	8,600	3,940
28	3,210	24,800	15,000	15,000	38,000	146,000	28,400	13,700	8,600	4,490	8,300	3,610
29	3,860	25,700	11,500	14,500	55,000	132,000	26,700	13,000	7,650	4,600	8,300	3,410
30	11,600	37,900	11,000	15,000		121,000	25,300	12,800	7,390	4,820	8,170	3,610
31	11,400		11,000	17,500		99,600		12,300		4,930	8,450	
Month												
	Maximum			Minimum			Mean			Per square mile		
October	11,600			3,110			4,473			0.186		
November	102,000			11,900			37,200			1.54		
December	78,600			11,000			33,560			1.39		
January	43,000			11,500			26,070			1.08		
February	53,000			12,000			16,910			.702		
March	691,000			75,000			216,000			8.97		
April	119,000			25,300			68,000			2.82		
May	29,800			12,300			19,140			.794		
June	16,500			7,390			10,650			.442		
July	7,780			3,720			5,220			.217		
August	8,600			3,500			5,657			.235		
September	9,800			3,050			4,765			.198		
The year	691,000			3,050			37,500			1.56		

SUSQUEHANNA RIVER BASIN

Susquehanna River at Marietta, Pa.

Location.— Water-stage recorder, lat. 40°3'15", long. 76°31'50", 420 feet above mouth of Chickies Creek and 1 mile below Marietta, Lancaster County. Zero of gage is 200.00 feet above mean sea level.

Drainage area.— 25,990 square miles.

Records available.— October 1931 to September 1936.

Extremes.— Maximum discharge during year, 787,000 second-feet Mar. 19 (gage height, 60.73 feet) from rating curve extended above 450,000 second-feet on basis of channel studies; minimum, 2,490 second-feet Sept. 26 (gage height, 31.78 feet); minimum daily discharge, 3,000 second-feet Sept. 20.

1931-36: Maximum discharge, that of Mar. 19, 1936; minimum, 618 second-feet Sept. 26, 1932 (gage height, 30.89 feet) during shut-down at York Haven Power plant in order to obtain low-water current meter measurements; minimum daily discharge, 1,380 second-feet Sept. 26, 1932.

Remarks.— Records good except those for extremely high stages and those for period of ice effect, Dec. 22 to Mar. 6, which are fair. Discharge for period of ice effect based on power-house records of Holtwood plant of Pennsylvania Water & Power Co. Flows below 8,000 second-feet regulated by York Haven Power Co. plant upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,450	12,300	42,200	13,500	19,000	78,000	90,200	26,300	12,200	7,820	4,990	9,240
2	4,710	13,200	38,600	13,000	20,000	87,500	81,300	25,400	11,900	7,820	4,510	10,300
3	4,330	25,800	37,400	20,000	17,000	84,500	68,800	24,600	11,400	13,500	4,510	9,490
4	4,280	40,200	32,900	25,500	17,500	88,500	73,700	24,600	11,100	11,100	4,040	9,240
5	4,390	29,300	27,400	29,000	17,000	85,500	72,900	24,600	10,600	8,750	3,950	8,040
6	4,640	22,400	24,200	34,000	16,500	86,500	92,600	26,300	9,740	8,750	3,660	6,520
7	4,880	18,100	21,000	33,000	15,500	100,000	125,000	30,900	8,990	8,040	3,890	6,120
8	4,850	16,000	20,800	33,000	15,000	148,000	126,000	29,000	8,990	7,150	3,660	5,740
9	5,190	14,500	20,100	46,000	15,000	97,900	120,000	26,300	8,280	6,520	3,240	5,370
10	5,780	14,200	19,300	47,000	14,000	101,000	109,000	24,600	8,510	6,120	3,980	5,190
11	5,200	15,800	21,600	43,500	13,500	132,000	103,000	22,300	8,280	5,740	5,190	4,840
12	4,940	16,000	29,600	41,500	12,500	308,000	99,500	21,600	8,510	6,320	5,670	4,220
13	4,760	17,100	42,200	39,000	13,500	457,000	95,700	20,100	15,800	6,120	5,550	4,070
14	5,180	45,400	46,100	38,000	13,000	402,000	93,800	20,100	12,800	5,550	5,930	4,290
15	4,740	99,100	55,800	37,000	13,000	292,000	95,700	19,400	14,000	5,550	5,850	3,920
16	4,430	105,000	64,900	39,000	14,500	212,000	92,000	18,700	15,300	5,020	6,940	3,490
17	4,280	90,200	73,700	38,500	15,500	211,000	81,300	18,000	13,400	4,510	7,150	3,540
18	4,060	75,800	81,300	40,500	16,500	396,000	73,300	17,300	12,500	4,430	6,730	3,630
19	3,960	60,400	75,800	40,000	17,000	693,000	64,900	17,300	17,000	6,620	6,380	3,520
20	3,980	48,100	61,800	29,000	17,500	700,000	57,300	17,000	19,400	3,520	5,560	3,000
21	4,280	42,200	48,800	25,000	16,000	514,000	51,500	16,600	17,000	3,530	5,240	3,270
22	4,260	43,500	35,500	23,000	14,500	382,000	47,400	16,600	14,300	5,160	5,110	3,380
23	4,080	47,400	29,500	20,500	14,000	280,000	43,500	18,000	13,400	5,740	4,950	3,430
24	3,910	43,800	28,000	17,500	14,000	203,000	41,000	19,400	15,000	4,930	6,120	3,240
25	3,750	37,700	21,500	14,500	13,500	162,000	39,200	18,000	12,800	5,350	7,530	3,380
26	3,180	31,900	15,500	12,500	17,500	140,000	36,200	16,600	11,100	4,130	11,600	3,100
27	3,300	27,600	14,000	13,000	25,000	144,000	32,900	15,300	10,000	4,300	10,000	3,240
28	3,760	25,700	13,500	16,500	38,000	150,000	30,900	15,300	9,490	5,550	9,740	4,190
29	3,960	27,900	12,500	16,000	54,500	135,000	29,000	14,000	9,490	5,370	10,500	3,400
30	7,200	35,900	12,000	16,500		126,000	27,100	13,100	8,040	5,370	10,000	3,520
31	14,800		12,500	19,000		107,000		13,400		5,550	9,240	

Month					Maximum	Minimum	Mean	Per square mile	Run-off in inches
October.....					14,800	3,180	4,823	0.186	0.21
November.....					105,000	12,300	38,080	1.46	1.63
December.....					81,300	12,000	34,840	1.34	1.54
January.....					47,000	12,500	28,190	1.08	1.24
February.....					54,500	12,500	17,930	.690	.74
March.....					700,000	78,000	229,100	8.21	10.16
April.....					126,000	27,100	73,160	2.61	3.14
May.....					30,900	13,100	20,350	.783	.90
June.....					19,400	8,040	11,990	.461	.51
July.....					13,500	3,520	6,256	.241	.28
August.....					11,600	3,240	6,175	.238	.27
September.....					10,300	3,000	4,931	.190	.21
The year.....					700,000	3,000	39,650	1.53	20.83

SUSQUEHANNA RIVER BASIN

Chemung River at Corning, N. Y.

Location.- Chain gage, lat. 42°8'50", long. 77°3'40", at Bridge Street Bridge, at Corning, Steuben County. Zero of gage is 912.82 feet above mean sea level.
 Drainage area.- 2,010 square miles.
 Records available.- December 1909 to September 1936.
 Extremes.- Maximum gage height observed during year, 19.3 feet Mar. 12; minimum, 1.9 feet July 20-23, July 28 to Aug. 5, Sept. 16-18, 27-30.
 1909-36: Maximum gage height, 20.1 feet July 8, 1935; minimum, 1.8 feet Sept. 2, 3, 1921.
 Remarks.- Maximum stage known prior to construction of dikes, 20.0 feet June 1, 1889. Records good. Gage not read Dec. 25, July 4. Gage heights are obtained at this station for flood-warning purposes. Discharge is not determined.

Daily gage height in feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.6	3.6	3.2	4.0	3.3	5.4	6.7	4.0	2.8	2.2	1.9	2.3
2	2.8	3.3	3.1	4.1	3.3	5.0	6.1	3.9	2.7	2.2	1.9	2.2
3	3.1	3.1	3.1	3.7	3.3	4.6	6.7	6.0	2.7	2.1	1.9	2.2
4	2.9	3.0	3.1	3.6	3.3	6.0	5.7	4.8	2.6	2.1	1.9	2.2
5	2.8	2.9	3.0	3.7	3.3	8.9	5.4	4.4	2.6	2.1	1.9	2.2
6	2.7	2.9	3.0	3.7	3.3	6.1	5.6	4.2	2.5	2.1	2.0	2.1
7	2.6	2.9	3.0	3.7	3.3	5.3	6.7	3.9	2.4	2.1	2.8	2.1
8	2.5	2.9	3.0	3.5	3.3	5.1	5.9	3.7	2.6	2.1	2.4	2.1
9	2.5	3.1	3.1	3.4	3.3	5.4	5.8	3.5	2.6	2.0	2.2	2.0
10	2.5	3.0	5.0	3.4	3.3	6.6	5.5	3.4	2.5	2.0	2.1	2.0
11	2.5	2.9	4.3	3.4	3.3	10.9	6.0	3.3	2.5	2.0	3.0	2.0
12	2.5	2.9	4.2	3.3	3.3	17.5	6.0	3.2	4.2	2.1	2.7	2.0
13	2.5	3.5	4.0	3.3	3.3	10.6	7.8	3.3	3.0	2.2	2.4	2.0
14	2.4	5.6	4.0	3.3	3.3	7.8	6.4	3.4	2.7	2.1	2.2	2.0
15	2.4	4.7	4.9	3.3	3.3	7.6	6.4	3.3	2.7	2.1	2.2	2.0
16	2.4	4.2	6.1	3.4	3.3	12.0	5.7	3.2	2.6	2.0	2.3	1.9
17	2.3	4.1	5.5	3.3	3.3	12.4	5.2	3.1	2.5	2.0	2.3	1.9
18	2.3	4.0	4.6	3.3	3.3	17.3	5.0	3.0	2.4	2.0	2.1	1.9
19	2.3	3.9	4.5	3.3	3.3	13.1	4.9	3.1	2.6	2.0	2.1	2.0
20	2.3	3.9	4.2	3.2	3.3	12.6	4.6	4.0	2.6	1.9	2.2	2.0
21	2.3	3.9	3.7	3.2	3.3	10.2	4.5	3.5	2.5	1.9	2.6	2.0
22	2.3	3.7	3.6	3.2	3.3	8.5	4.9	3.2	2.4	1.9	2.6	2.0
23	2.3	3.5	3.6	3.2	3.3	8.3	4.4	3.1	2.3	1.9	2.7	2.0
24	2.3	3.3	3.4	3.2	3.3	8.0	4.2	3.0	2.3	2.0	2.7	2.0
25	2.3	3.1	3.4	3.2	3.3	11.2	4.0	3.0	2.3	2.0	2.5	2.0
26	2.3	3.1	4.9	3.3	3.3	3.9	11.9	3.8	3.0	2.2	2.0	2.4
27	2.3	3.1	4.3	3.3	3.3	6.4	9.2	3.7	2.9	2.2	2.0	2.3
28	2.3	3.1	4.0	3.3	3.3	7.5	10.2	3.6	3.2	2.2	1.9	2.2
29	2.3	3.1	4.0	3.3	3.3	8.0	3.6	3.0	3.0	2.2	1.9	2.2
30	5.2	3.4	3.9	3.3	3.3	7.1	3.9	2.9	2.2	1.9	2.3	1.9
31	4.2	3.9	3.9	3.3	3.3	7.8	2.9	2.9	2.2	1.9	2.3	1.9

SUSQUEHANNA RIVER BASIN

Towanda Creek near Monroeton, Pa.

Location.- Chain gage, lat. 41°42'35", long. 76°29'0", at highway bridge 1½ miles above mouth of South Branch of Towanda Creek and 1½ miles southwest of Monroeton, Bradford County. Zero of gage is 774.14 feet above mean sea level.
 Drainage area.- 214 square miles.
 Records available.- October 1920 to September 1921, October 1931 to September 1936 in reports of U. S. Geological Survey; January 1914 to September 1936 in reports of Pennsylvania Department of Forests and Waters.
 Average discharge.- 18 years (1914-16, 1920-36), 287 second-feet.
 Extremes.- Maximum discharge during year, 15,200 second-feet Mar. 18 (gage height, 10.78 feet, from floodmarks); minimum, 0.9 second-foot Aug. 4.
 1914-36: Maximum discharge, about 15,800 second-feet Nov. 16, 1926 (gage height, 11.0 feet, from graph based on gage readings); minimum, 0.7 second-foot Sept. 15, 17, 21, 22, 1932.
 Remarks.- Records fair. Discharge for periods of ice effect, Dec. 24 to Jan. 2, Jan. 20 to Feb. 27, determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily gage readings. Some regulation at low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	69	241	102	59	905	360	134	76	26	1.3	20
2	13	50	213	105	58	415	370	125	67	25	1.2	16
3	12	54	122	173	58	318	370	311	59	21	1.2	12
4	12	54	161	365	57	318	302	480	56	29	1.0	10
5	11	32	116	415	56	905	280	330	53	26	1.4	9.0
6	11	50	131	313	56	530	548	284	45	23	3.3	7.8
7	11	26	113	234	55	415	510	244	40	18	3.9	5.7
8	11	39	111	193	55	412	420	214	46	14	2.3	4.3
9	11	43	147	173	55	383	370	190	56	11	1.5	3.9
10	9.6	35	192	230	55	964	420	166	46	9.6	1.3	3.6
11	10	33	248	206	55	4,080	450	152	46	12	4.0	3.3
12	11	32	216	185	54	8,710	420	143	67	16	4.5	2.8
13	9.6	2,270	185	188	54	3,040	705	128	74	13	2.3	2.8
14	9.6	1,050	665	234	54	2,040	510	128	98	11	2.1	2.6
15	9.6	530	740	252	54	2,120	420	118	80	9.0	5.4	2.5
16	9.6	365	920	182	54	3,740	370	105	63	6.0	3.9	2.2
17	9.1	295	500	176	54	7,440	330	96	53	5.4	2.5	3.0
18	9.1	295	340	167	54	9,530	293	89	59	4.3	1.7	3.0
19	9.1	255	295	123	55	4,170	270	115	57	4.2	1.3	3.6
20	9.1	665	255	100	55	2,060	248	143	49	3.9	3.1	3.3
21	9.6	500	220	90	55	2,330	239	105	40	3.6	3.0	2.6
22	10	390	196	85	56	1,300	257	93	31	3.0	2.4	2.4
23	12	295	170	80	57	955	214	95	33	3.0	2.4	2.0
24	16	224	150	75	60	915	194	82	39	3.9	3.5	2.4
25	16	188	140	70	65	927	176	112	36	4.5	3.1	2.8
26	16	179	125	68	100	872	166	93	30	3.6	2.3	2.3
27	14	164	115	66	460	729	152	109	28	2.8	1.3	2.6
28	13	206	110	65	1,040	642	143	112	30	2.4	1.6	3.0
29	13	390	103	63	740	512	137	99	27	3.0	1.9	2.8
30	255	295	102	62		432	134	93	26	2.6	2.7	3.6
31	114		100	60		443		37		2.2	2.8	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	255	9.1	22.5	0.105	0.12
November	2,270	26	300	1.40	1.56
December	320	100	239	1.12	1.29
January	415	60	158	.738	.85
February	1,040	54	129	.603	.65
March	9,530	318	2,018	9.43	10.97
April	705	154	326	1.52	1.70
May	430	32	154	.720	.83
June	98	26	50.5	.235	.26
July	29	2.2	10.4	.049	.06
August	54	1.0	23.1	.108	.12
September	20	2.0	5.00	.023	.03
The year	9,530	1.0	238	1.35	18.34

Tunkhannock Creek at Dixon, Pa.

Location.- Chain gage, lat. $41^{\circ}33'30''$, long. $75^{\circ}53'40''$, at highway bridge at Dixon, Wyoming County, 3 miles northeast of Tunkhannock. Zero of gage is 610.50 feet above mean sea level.

Drinage area.- 383 square miles.

Drainage area.- 303 square miles;
Records available.- October 1918 to September 1921, October 1931 to September 1936 in reports of U. S. Geological Survey; January 1914 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 18 years (1918-36), 540 second-feet.

Extremes.-- Maximum discharge during year, 14,900 second-foot Mar. 18 (gage height, 11.36 feet, from floodmarks) from rating curve extended above 5,300 second-feet; minimum, 20 second-feet Aug. 3, 4 (gage height, 0.86 foot).

1914-36: Maximum discharge, 19,100 second-feet Sept. 30, 1924 (gage height, 13.1 feet) from rating curve extended above 5,500 second-feet; minimum, 9.0 second-feet Aug. 12, 1930 (gage height, 0.73 foot).

Remarks. - Records fair. Discharge for periods of ice effect, Dec. 19 to Jan. 4, Jan. 20 to Mar. 10, determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily gage readings. Some regulation from storage in natural and artificial lakes and from operation of gristmills upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	57	1,220	1,220	235	225	715	320	276	90	63	22	32
2	59	750	1,050	240	220	580	370	256	75	53	21	73
3	76	545	820	350	215	480	1,310	236	66	48	21	57
4	59	420	715	600	210	450	320	256	50	58	22	51
5	56	340	512	970	205	450	750	232	64	47	22	54
6	44	1,050	480	320	205	545	1,500	207	51	43	23	44
7	47	450	392	645	200	400	1,220	187	47	40	40	38
8	50	620	450	572	200	400	1,130	184	40	37	39	37
9	47	645	715	572	200	680	970	181	52	36	32	41
10	42	480	820	1,050	200	1,500	1,220	140	47	34	20	40
11	43	480	895	705	195	6,040	1,400	140	43	40	71	34
12	41	420	643	680	195	8,740	1,500	127	56	34	77	31
13	42	7,500	578	610	195	4,490	1,600	121	50	32	56	31
14	42	5,640	578	578	195	2,700	1,500	146	57	31	59	31
15	45	2,480	1,130	512	195	2,440	1,310	137	63	30	63	34
16	30	1,600	1,220	1,700	195	2,590	1,130	111	60	28	36	34
17	41	1,310	895	970	195	5,560	970	90	47	26	57	40
18	36	1,500	680	705	195	11,400	320	100	54	27	51	37
19	41	1,220	540	545	195	8,060	750	153	492	26	33	37
20	36	2,130	450	470	200	5,220	680	256	216	24	51	31
21	36	2,240	390	410	200	4,430	610	161	634	24	69	30
22	36	1,800	330	375	205	3,730	970	119	276	24	102	30
23	39	1,310	300	350	210	2,370	645	100	155	24	102	29
24	53	895	200	330	215	1,830	545	93	155	26	222	27
25	54	820	265	310	220	1,670	455	152	149	26	204	29
26	53	750	255	295	235	1,300	425	114	106	25	134	36
27	43	715	245	260	330	1,400	370	121	80	24	106	32
28	42	1,510	240	265	400	1,830	320	137	82	24	86	32
29	46	3,000	235	255	500	1,220	320	106	77	23	100	31
30	278	1,600	235	245		1,030	298	82	64	22	122	33
31	3,310		235	235		964		84		21	116	
Month					Maximum		Minimum		Mean		Per square mile	Run-off in inches
October					3,310		36		159		0.415	0.48
November					7,500		340		1,527		3.89	4.45
December					1,220		235		574		1.50	1.73
January					1,700		235		550		1.44	1.66
February					500		195		226		1.590	.64
March					11,400		450		2,757		7.20	8.30
April					1,600		288		911		2.38	2.66
May					276		62		155		1.405	.47
June					654		43		117		1.505	.34
July					63		21		32.9		1.086	.10
August					222		21		72.1		1.188	.22
September					32		27		32.9		1.102	.11
The year					11,400		21		595		1.55	21.16

Wapwallopen Creek near Wapwallopen, Pa.

Location.- Water-stage recorder, lat. 41°3'35", long. 76°5'25", at Harts Bridge, 2½ miles southeast of Wapwallopen, Luzerne County, and 3½ miles above mouth. Zero of gage is 752.41 feet above mean sea level.

Drainage area.- 45.8 square miles.

Records available.- October 1919 to September 1921, October 1931 to September 1936 in reports of U. S. Geological Survey; October 1919 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 16 years (1920-36), 61.5 second-feet.

Extremes.—Maximum discharge during year, 1,540 second-feet Mar. 18 (gage height, 6.58 feet); minimum, 1.8 second-feet Sept. 1 (gage height, 0.80 foot); minimum daily discharge, 2.5 second-feet Sept. 2.

1919-36: Maximum discharge, 2,260 second-feet Sept. 30, 1924 (gage height, 7.9 feet, from graph based on gage readings) from rating curve extended above 1,300 second-feet; minimum, that of Sept. 1, 1936; minimum discharge, that of Sept. 2, 1936.

Remarks. - Records good except those for periods of ice effect and for extremely low stages, which are fair. Discharge for periods of ice effect, Dec. 5-8, Dec. 21 to Mar. 9, determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations in adjacent drainage areas. Some regulation at low stages from operation of gristmills upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.7	28	166	56	43	90	88	45	20	24	5.4	5.4
2	10	16	132	58	42	80	107	39	17	19	5.0	2.5
3	11	14	110	170	42	80	103	37	16	18	4.4	3.2
4	7.3	13	95	150	41	90	80	43	15	19	4.0	3.5
5	9.0	11	80	120	41	110	72	40	14	16	4.7	3.3
6	7.5	13	75	105	40	90	231	35	12	14	5.4	3.1
7	8.0	14	70	96	40	75	177	32	12	14	5.8	2.9
8	8.8	13	65	90	39	66	157	31	13	12	6.1	3.1
9	8.4	11	90	88	39	80	136	29	13	10	5.4	2.9
10	7.5	10	90	98	38	311	178	28	12	15	4.1	2.9
11	8.2	11	107	80	37	784	166	25	12	23	8.0	3.1
12	8.6	11	83	72	37	1,110	141	24	18	16	6.8	3.3
13	8.4	169	84	68	37	556	153	22	24	14	6.1	3.1
14	8.0	158	159	72	38	383	134	30	17	12	5.0	3.1
15	6.8	79	133	72	40	344	117	24	16	11	5.0	3.3
16	7.5	58	144	90	39	313	110	22	14	10	4.7	3.1
17	6.8	53	115	85	38	618	97	20	11	12	4.4	2.9
18	6.8	64	98	70	38	1,150	87	20	24	7.4	4.4	3.3
19	7.2	68	92	62	37	821	79	50	197	5.2	3.8	3.5
20	6.4	105	86	60	36	581	73	56	66	5.9	3.5	3.5
21	6.8	118	80	80	35	509	73	31	50	6.9	3.3	3.1
22	8.0	104	76	70	34	374	78	25	30	8.4	3.5	2.7
23	8.4	94	72	62	34	279	64	24	30	7.5	3.5	2.9
24	8.8	80	70	70	35	241	56	23	40	12	8.4	3.1
25	7.2	71	68	62	38	195	51	23	36	11	9.6	2.7
26	8.0	68	66	57	55	161	50	20	27	8.0	6.6	2.7
27	6.8	67	64	53	100	164	46	34	24	6.8	5.0	2.7
28	6.8	320	62	50	130	159	42	29	26	7.2	4.4	3.3
29	7.2	526	60	48	120	124	45	23	22	7.2	5.0	4.5
30	35	235	58	46		109	52	20	24	5.8	6.8	7.9
31	28		57	44		100		22		5.4	6.8	
Month					Maximum		Minimum		Mean		Per square mile	Run-off in inches
October					35		6.4		9.45		0.206	0.24
November					526		10		86.9		1.90	2.12
December					166		57		90.7		1.98	2.28
January					170		44		77.5		1.69	1.95
February					130		34		47.0		1.03	1.11

West Branch of Susquehanna River at Bower, Pa.

Location.— Water-stage recorder, lat. 40°53'50", long. 78°40'40", at highway bridge at Bower, Clearfield County, 4.8 miles below Mahaffey and mouth of Chest Creek. Zero of gage is 1.206.39 feet above mean sea level.

Drainage area.- 315 square miles.

Records available.- October 1918 to September 1921, October 1931 to September 1936 in reports of U. S. Geological Survey; October 1913 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 23 years, 558 second-feet.

Extremes.- Maximum discharge during year, 31,500 second-feet Mar. 18 (gage height, 19.74 feet, from floodmark in gage shelter) from rating curve extended on basis of slope-area determination; minimum, 23 second-feet July 21 (gage height, 3.77 feet).

1913-36: Maximum discharge, that of Mar. 18, 1936; minimum, 16 second-
feet Sept. 29, Oct. 1, 6, 13, 1930 (gate height, 3.66 feet).

Remarks.—Records good except those for high stages, which are fair, and those for period of ice effect and for periods of recorder failure, which are poor. Discharge for periods of ice effect, Dec. 5-8, Dec. 23 to Jan. 12, Jan. 21 to Feb. 29, determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations downstream. Discharge for periods of recorder failure, Mar. 1-5, Sept. 12-25, determined by comparison with records for stations downstream. Some regulation at low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	50	84	186	290	230	1,900	745	208	66	117	42	399		
2	86	71	169	350	220	1,700	932	217	65	78	38	272		
3	70	63	158	600	210	1,500	900	245	58	60	34	226		
4	53	53	137	1,000	220	1,900	709	242	54	54	34	171		
5	47	56	135	750	240	2,750	628	206	51	51	45	135		
6	43	72	140	620	210	2,300	2,150	106	51	49	750	112		
7	40	77	160	660	190	1,900	2,100	174	50	44	262	93		
8	41	100	220	640	175	1,800	1,510	161	61	39	130	94		
9	41	115	1,230	800	160	1,700	1,170	152	103	37	96	77		
10	41	94	1,030	1,300	150	1,930	1,240	143	74	34	67	71		
11	39	84	900	1,100	140	4,010	1,200	135	65	34	56	63		
12	42	112	762	900	135	5,140	1,200	135	125	31	56	74		
13	49	1,830	670	796	130	2,990	1,060	133	185	30	50	64		
14	41	1,070	1,060	997	125	1,930	906	150	302	28	43	66		
15	42	621	1,530	846	130	2,200	799	129	160	28	45	68		
16	41	424	2,200	792	160	3,420	697	114	106	27	93	72		
17	38	329	1,630	670	165	15,800	606	106	82	26	216	60		
18	40	283	1,200	750	160	22,000	541	101	87	26	92	55		
19	42	234	920	1,130	150	6,530	460	148	124	25	562	50		
20	43	255	732	828	135	3,180	404	200	132	24	704	49		
21	40	249	470	700	130	2,410	376	127	84	25	297	42		
22	40	218	404	600	125	1,950	408	106	66	31	174	45		
23	55	181	360	500	122	1,970	348	93	56	29	125	38		
24	61	143	340	450	120	1,780	305	88	57	49	303	40		
25	55	127	320	410	200	1,780	265	95	57	72	468	45		
26	47	153	310	370	1,000	1,510	248	85	53	47	622	52		
27	44	138	300	340	2,500	1,680	233	87	50	75	414	46		
28	40	176	290	310	3,500	1,630	217	82	49	196	239	42		
29	55	252	290	280	2,400	1,230	211	77	60	94	943	80		
30	158	207	280	260		1,100	211	74	118	58	1,020	400		
31	109		280	240		921		70		47	573			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October.....					158		38		52.7		0.167		0.19	
November.....					1,830		53		262		.032		.93	
December.....					2,200		135		607		1.93		2.22	
January.....					1,300		240		654		2.08		2.40	
February.....					5,500		120		467		1.48		1.60	
March.....					22,000		921		3,369		10.7		12.34	
April.....					2,160		211		760		2.41		2.69	
May.....					245		70		138		.438		.50	
June.....					362		49		91.0		.289		.32	
July.....					196		24		50.5		.160		.18	
August.....					1,020		34		294		.933		1.08	
September.....					400		38		104		.330		.37	
The year.....					22,000		24		574		1.82		24.82	

West Branch of Susquehanna River at Renovo, Pa.

Location.- Water-stage recorder, lat. 41°18'50", long. 77°44'45", at highway bridge at Renovo, Clinton County. Zero of gage is 634.03 feet above mean sea level.

Drainage area.- 2,975 square miles.

Records available. - October 1919 to September 1921, October 1931 to September 1936 in reports of U. S. Geological; July 1895 to December 1903, October 1905 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 24 years (1908-15, 1919-36), 4,727 second-feet.

Extremes.— Maximum discharge during year, 236,000 second-feet Mar. 18 (gage height, 29.39 feet, from floodmark in gage shelter) from rating curve extended on basis of slope-area determination; minimum, 188 second-feet July 22. 23.

1895-1903, 1905-36: Maximum discharge, that of Mar. 18, 1936; minimum, 80 second-feet Dec. 6, 1908 (gauge height, -1.10 feet).

Remarks.—Records good except those for periods of ice effect, Dec. 5-10, Dec. 29 to Jan. 4, Jan. 22 to Mar. 7, which are poor and were determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations at Bower and at Williamsport.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	397	915	2,560	2,400	1,300	13,000	10,700	2,870	1,290	1,270	485	2,140
2	465	926	2,470	2,450	1,300	12,000	9,750	2,970	1,210	1,430	360	1,580
3	669	782	2,230	2,600	1,300	10,000	10,500	3,160	1,130	1,170	288	1,310
4	593	669	2,000	3,000	1,250	9,000	9,750	3,450	1,040	974	202	1,070
5	540	590	1,300	5,360	1,250	11,000	8,530	3,450	985	831	317	919
6	494	598	1,200	5,360	1,200	17,000	10,600	3,250	886	730	631	310
7	430	687	1,200	4,500	1,200	14,000	19,700	2,960	842	630	1,230	700
8	404	715	1,500	4,500	1,200	12,500	17,700	2,690	1,210	557	1,310	584
9	367	884	2,000	4,040	1,200	10,900	13,900	2,520	1,560	503	1,060	512
10	349	947	5,000	4,160	1,150	11,700	12,100	2,360	1,590	449	760	476
11	338	958	6,000	4,740	1,150	25,400	11,700	2,200	1,670	432	750	409
12	349	1,040	5,870	5,480	1,100	74,800	12,500	2,050	2,200	503	690	392
13	349	3,000	5,740	4,860	1,100	50,700	12,500	2,050	1,870	476	566	360
14	343	9,730	6,130	4,740	1,100	29,200	11,300	1,900	1,350	458	458	333
15	343	9,600	8,460	5,240	1,150	22,500	9,750	1,840	2,360	400	494	346
16	321	5,360	12,100	5,480	1,200	28,600	8,530	1,730	2,050	324	611	331
17	311	4,040	13,500	4,980	1,300	80,500	7,370	1,630	1,530	238	740	360
18	311	3,390	10,700	4,620	1,400	201,000	6,450	1,520	1,470	249	680	392
19	316	3,000	8,540	4,270	1,400	112,000	5,740	1,720	2,680	223	611	384
20	332	2,640	7,070	4,040	1,250	60,700	5,070	2,600	2,280	206	740	317
21	338	2,560	5,870	3,800	1,200	39,000	4,700	2,280	1,980	194	1,020	288
22	332	2,390	4,510	3,500	1,150	28,300	4,570	2,200	1,650	188	1,410	256
23	349	2,150	3,710	3,200	1,100	23,000	4,100	1,910	1,340	188	1,040	236
24	404	1,860	3,200	2,900	1,100	20,800	3,770	1,770	1,140	249	864	236
25	410	1,640	2,900	2,700	1,200	22,500	3,350	1,910	1,030	370	1,230	256
26	404	1,590	2,700	2,400	1,500	27,000	3,160	1,680	952	512	1,730	275
27	361	1,560	2,600	2,200	3,000	24,000	2,960	1,670	875	467	1,400	268
28	349	1,790	2,500	2,000	7,000	25,500	2,970	1,730	842	408	1,280	232
29	417	2,230	2,450	1,900	14,000	20,400	2,960	1,610	780	512	1,440	282
30	775	2,560	2,400	1,600		15,600	2,960	1,460	853	557	2,040	360
31	1,110		2,400	1,450		13,300		1,400		611	2,940	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October.....					1,110	311	428	0.144		0.17		
November.....					9,730	590	2,360	.793		.88		
December.....					13,500	1,200	4,542	1.53		1.76		
January.....					5,480	1,450	3,689	1.24		1.43		
February.....					14,000	1,100	1,922	.646		.70		
March.....					201,000	9,000	34,360	11.5		13.26		
April.....					19,700	2,870	6,318	2.90		3.12		
May.....					3,450	1,400	2,207	.742		.85		
June.....					2,680	780	1,439	.464		.54		
July.....					1,450	188	528	.177		.20		
August.....					2,940	282	952	.320		.37		
September.....					2,140	236	549	.185		.21		
The year.....					201,000	188	5,147	1.73		23.50		

West Branch of Susquehanna River at Lock Haven, Pa.

Location.— Chain gage, lat. 41°8'20", long. 77°28'30", at Jay Street Bridge, at Lock Haven, Clinton County. Zero of gage is 535.00 feet above mean sea level.

Drainage area.— 3,338 square miles.

Records available.— October 1913 to August 1923, August 1925 to September 1936.

Extremes.— Maximum gage height during year, 32.28 feet, from floodmark, Mar. 18; minimum, 0.90 foot July 23.

1913-23, 1925-36: Maximum gage height, that of Mar. 18, 1936; minimum, 0.60 foot Sept. 25, 1932.

Remarks.— Records fair. Gage not read Mar. 6-11, Aug. 23-29. Gage heights are obtained at this station for flood-warning purposes. Discharge is not determined.

Daily mean gage height in feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.20	2.08	3.48	4.88	4.50	16.75	6.62	3.63	2.33	2.10	1.51	8.12
2	1.30	1.89	3.38	4.95	4.52	16.32	6.29	3.59	2.30	2.42	1.42	7.74
3	1.42	1.84	3.25	5.13	4.52	16.15	6.46	3.70	2.13	2.32	1.22	7.43
4	1.61	1.77	3.10	5.37	4.52	15.40	6.29	3.92	2.52	2.09	1.09	7.15
5	1.47	1.63	2.93	5.77	4.52	15.25	6.04	3.89	2.78	1.89	1.12	6.60
6	1.40	1.61	2.75	5.90	4.52		6.14	3.80	2.20	1.78	1.36	6.08
7	1.32	1.66	2.53	5.44	4.53		7.96	3.64	2.03	1.65	2.11	5.72
8	1.25	1.82	3.12	5.24	4.53		8.22	3.54	2.24	1.61	2.54	5.40
9	1.20	1.95	3.45	5.06	4.51		7.34	3.49	2.42	1.46	2.55	5.12
10	1.14	2.00	4.05	4.98	4.47		6.76	3.30	2.49	1.40	2.08	4.88
11	1.12	2.17	5.44	4.92	4.43		6.42	3.18	2.52	1.33	1.88	4.65
12	1.10	2.46	5.19	5.40	4.43	20.51	6.92	3.08	3.74	1.60	1.76	4.48
13	1.08	3.60	5.18	5.44	4.43	16.59	6.79	3.07	3.31	1.47	1.68	4.40
14	1.10	6.26	5.36	5.24	4.43	11.45	6.57	3.14	2.91	1.43	1.52	4.32
15	1.10	6.44	6.20	5.22	4.44	9.42	6.25	3.02	3.08	1.40	1.49	4.29
16	1.08	5.09	7.35	5.57	4.55	9.97	5.95	2.89	3.14	1.28	1.53	4.25
17	1.06	4.49	7.90	5.44	4.54	16.53	5.73	2.78	2.78	1.21	1.70	4.31
18	1.04	4.14	7.15	5.22	4.52	29.54	5.63	2.71	2.57	1.13	1.92	4.34
19	1.02	3.82	6.60	5.13	4.51	25.80	5.25	2.72	3.13	1.04	1.88	4.29
20	1.02	3.58	5.95	5.16	4.51	17.95	4.95	2.85	3.22	.99	1.75	4.40
21	1.04	3.42	5.38	5.21	4.51	12.93	4.73	2.98	2.92	.93	1.83	4.26
22	1.03	3.32	4.90	5.10	4.51	10.55	4.57	3.08	2.78	.95	1.81	4.15
23	1.06	3.16	4.49	4.94	4.48	9.14	4.43	2.99	2.52	.92		4.04
24	1.11	3.00	4.42	4.64	4.44	8.74	4.20	2.92	2.28	1.06		4.00
25	1.20	2.83	4.40	4.34	4.39	8.69	3.97	2.83	2.16	1.09		3.97
26	1.14	2.77	4.78	4.30	4.35	9.94	3.85	2.79	2.06	1.26		3.97
27	1.18	2.81	4.95	4.33	4.39	9.59	3.78	2.72	1.97	1.45		4.00
28	1.22	2.85	5.00	4.37	9.09	9.54	3.66	2.67	1.91	1.39		4.06
29	1.49	3.09	5.00	4.42	18.42	9.14	3.62	2.61	1.86	1.36		4.14
30	1.97	3.02	5.00	4.43	7.92	7.92	3.69	2.51	1.84	1.44	7.88	4.43
31	2.26		4.94	4.47	7.19	7.19		2.46		1.50	8.12	

West Branch of Susquehanna River at Williamsport, Pa.

Location.— Water-stage recorder, lat. 41°14'15", long. 76°59'55", at highway bridge at Williamsport, Lycoming County. Zero of gage is 494.55 feet above mean sea level.

Drainage area.— 5,682 square miles.

Records available.— March 1895 to December 1913, October 1918 to September 1921, October 1931 to September 1936 in reports of U. S. Geological Survey; March 1895 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.— 41 years 8,867 second-feet.

Extremes.— Maximum discharge during year, 264,000 second-feet Mar. 18 (gage height, 33.57 feet, from floodmark in gage shelter) from rating extended on basis of slope-area determination; minimum, 610 second-feet Oct. 20.

1895-1936: Maximum discharge, that of Mar. 18, 1936; minimum, 231 second-feet Sept. 12, 13, 1932 (gage height, -0.42 foot); minimum daily discharge, 250 second-feet June 30, July 10, 1912.

Remarks.— Records fair except those for periods of ice effect, Dec. 6-9, Dec. 29 to Jan. 2, Jan. 19 to Mar. 11, which are poor and were determined from gage heights, weather records, and by comparison with records for stations upstream. Slight regulation at low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	770	2,760	5,210	3,600	2,500	23,000	23,900	5,780	2,460	1,900	893	3,760
2	840	2,090	4,930	3,800	2,400	24,000	20,900	5,640	2,280	1,900	893	2,970
3	926	1,910	4,660	4,660	2,300	19,000	20,400	6,080	2,090	2,240	850	2,250
4	994	1,620	4,130	5,640	2,200	17,000	19,000	6,940	1,970	2,020	780	1,880
5	1,050	1,450	2,710	6,540	2,100	22,000	17,100	7,000	1,810	1,730	751	1,670
6	970	1,320	2,200	6,340	2,050	31,000	19,300	6,690	1,690	1,530	780	1,450
7	904	1,300	2,200	6,690	2,000	32,000	30,200	6,230	1,610	1,390	1,290	1,300
8	860	1,420	2,600	6,080	1,950	23,000	32,300	5,780	1,610	1,260	1,920	1,210
9	810	1,450	3,500	6,080	1,950	20,000	26,400	5,210	1,950	1,130	1,720	1,090
10	760	1,530	4,930	6,080	1,950	22,000	23,400	4,800	2,390	1,080	1,670	994
11	742	1,590	8,980	5,640	1,900	45,000	21,900	4,520	2,350	1,020	1,460	948
12	715	1,700	10,000	5,950	1,750	145,000	22,400	4,390	3,540	1,040	1,570	904
13	708	12,000	10,000	6,840	1,750	137,000	22,900	4,260	5,070	1,220	1,620	850
14	715	20,900	13,000	6,840	1,700	74,600	21,400	4,150	4,130	1,180	1,330	840
15	697	19,500	13,500	6,380	1,700	47,100	19,000	3,800	5,640	1,050	1,260	840
16	679	13,600	21,900	6,840	1,650	48,400	17,100	3,520	3,640	982	1,290	830
17	670	10,000	24,900	7,320	1,700	107,000	15,300	3,190	3,300	915	1,220	800
18	653	8,470	22,400	6,840	1,900	218,000	13,600	3,090	2,960	850	1,250	820
19	644	7,160	18,100	6,400	2,100	225,000	11,900	3,190	3,190	800	1,220	850
20	619	6,380	14,900	6,000	2,000	153,000	11,200	3,760	4,130	770	1,130	840
21	644	6,230	12,300	5,600	1,900	94,200	10,000	4,520	3,520	751	1,120	730
22	670	5,640	8,840	5,200	1,850	64,600	9,500	3,380	2,970	760	1,510	700
23	670	4,930	7,640	4,900	1,750	46,500	8,980	3,520	2,500	751	2,240	730
24	679	4,390	5,640	4,600	1,700	40,100	7,970	3,300	2,190	770	2,040	760
25	653	3,380	5,640	4,300	1,650	39,100	7,320	3,300	1,920	770	1,720	724
26	715	3,520	4,930	4,000	1,700	45,500	6,690	3,190	1,770	790	1,690	724
27	706	3,410	4,590	3,700	3,000	44,900	6,230	3,080	1,650	830	2,040	724
28	724	3,520	4,260	3,400	8,000	44,500	5,930	3,080	1,560	915	2,020	715
29	870	4,930	4,000	3,100	15,000	40,000	5,640	3,080	1,480	926	1,980	730
30	3,900	5,210	3,700	2,800		31,900	5,780	2,260	1,500	860	2,520	840
31	3,880		3,600	2,700		27,800		2,560		871	2,260	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October.....	3,900	619	962	0.169	0.19
November.....	20,900	1,300	5,457	.960	1.07
December.....	24,900	2,200	8,545	1.50	1.73
January.....	7,320	2,700	5,319	.936	1.08
February.....	15,000	1,650	2,614	.460	.50
March.....	225,000	17,000	32,970	11.1	12.90
April.....	32,300	5,640	16,140	2.84	3.17
May.....	7,000	2,560	4,334	.763	.88
June.....	5,070	1,480	2,558	.460	.50
July.....	2,240	751	1,128	.199	.23
August.....	2,860	751	1,504	.265	.31
September.....	3,760	715	1,159	.204	.23
The year.....	225,000	619	9,462	1.67	22.69

Clearfield Creek at Dimeling, Pa.

Location.- Water-stage recorder, lat. 40°58'15", long. 78°24'25", at highway bridge at Dimeling, Clearfield County, 400 feet below mouth of Little Clearfield Creek. Zero of gage is 1,145.56 feet above mean sea level.

Drainage area.- 371 square miles.

Records available.- October 1918 to September 1921, October 1931 to September 1936 in reports of U. S. Geological Survey; October 1913 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 23 years, 575 second-feet.

Average discharge, - 23 years, 575 second-feet.
Extremes. - Maximum discharge during year, 37,600 second-feet Mar. 18 (gage height, 18.49 feet, from floodmark in gage shelter) from rating curve extended above 6,000 second-feet; minimum, 18 second-feet July 20, Aug. 2 (gage height, 3.26 feet); minimum daily discharge 22 second-feet July 20.

1913-36: Maximum discharge, that of Mar. 18, 1936; minimum, 6 second-feet October 1, 9, 1926 (gage height, 3.15 feet); minimum daily discharge, 7.1 second-October 1, 1925.

Remarks.- Records good except those for extremely high stages and for period of ice effect and recorder failure, which are poor. Discharge for periods of ice effect, Dec. 5-9, Dec. 22 to Feb. 28, determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations in adjacent drainage areas. Discharge for periods of recorder failure, May 4, 5, 27-30, Aug. 5-12, determined by comparison with records for stations mentioned above. Some regulation at low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	41	74	177	280	250	2,580	888	223	91	190	46	232
2	52	57	146	350	230	2,280	1,110	214	82	151	27	174
3	50	48	126	550	220	1,820	1,200	238	76	113	29	153
4	49	43	93	1,000	230	1,560	914	230	70	92	33	149
5	45	42	110	700	250	2,470	796	222	64	84	525	120
6	42	46	103	600	210	2,530	2,210	214	60	80	395	91
7	38	51	101	640	190	2,130	2,490	198	63	68	175	76
8	36	64	99	600	170	1,570	1,770	184	122	61	100	66
9	37	70	400	700	150	1,490	1,390	172	165	55	70	60
10	37	67	668	1,500	140	2,270	1,510	162	113	49	55	54
11	36	60	657	1,200	130	4,460	1,470	153	96	46	53	52
12	33	62	674	950	125	7,560	1,430	170	113	45	48	54
13	36	1,470	585	750	122	4,520	1,270	165	423	44	41	49
14	37	1,330	966	950	120	2,630	1,100	165	673	44	38	52
15	37	624	1,550	800	120	2,640	955	160	547	37	38	55
16	36	406	2,230	740	125	3,650	842	140	207	33	128	63
17	36	322	1,180	680	160	14,100	739	128	153	32	86	47
18	36	295	1,160	900	150	32,700	657	122	221	32	67	40
19	37	253	892	1,200	140	14,600	564	149	454	30	59	36
20	37	239	704	900	130	5,680	481	237	423	22	80	37
21	36	236	468	750	125	3,430	434	192	240	35	110	27
22	35	216	420	650	123	2,670	442	149	177	27	92	34
23	38	182	390	560	121	2,530	406	130	144	27	69	27
24	41	143	360	520	120	2,200	348	119	128	66	190	31
25	39	118	340	480	125	2,090	309	113	119	56	358	39
26	40	144	330	440	800	1,810	283	101	110	90	200	42
27	36	128	320	400	2,200	1,870	263	101	99	97	245	40
28	35	152	310	360	3,200	2,060	244	98	92	131	142	36
29	38	203	300	330	2,810	1,480	238	91	86	145	253	65
30	64	210	290	300		1,290	232	88	108	87	743	485
31	94		280	270		1,060		94		60	365	

Month				Maximum	Minimum	Mean	Per square mile	Run-off in inches
October.....				94	33	41.5	0.112	0.13
November.....				1,470	42	245	.660	.74
December.....				2,230	93	530	1.43	1.65
January.....				1,500	270	679	1.83	2.11
February.....				3,200	120	448	1.21	1.30
March.....				32,700	1,080	4,379	11.8	13.60
April.....				2,490	232	900	2.43	2.71
May.....				258	87	159	.429	.49
June.....				673	60	180	.485	.54
July.....				190	22	68.7	.185	.21
August.....				743	27	187	.423	.49
September.....				485	27	122.9	.223	.25
The year.....				32,700	22	660	1.78	24.22

Driftwood Branch of Sinnemahoning Creek at Sterling Run, Pa.

Location.— Staff gage, lat. 41°24'30", long. 78°11'25", 800 feet above highway bridge at Sterling Run, Cameron County, and 1,100 feet above mouth of Sterling Run. Zero of gage is 894.60 feet above mean sea level.

Drainage area.- 281 square miles.

Records available.- November 1918 to September 1921, October 1931 to September 1936 in reports of U. S. Geological Survey; September 1913 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 17 years (1919-36), 440 second-feet.

Extremes.— Maximum discharge during year, 28,400 second-feet Mar. 17 (gage height, 12.0 feet, from graph based on gage readings) from rating curve extended on basis of slope-area determination; minimum, 1.8 second-feet July 17 (gage height, 1.05 feet).

1913-36: Maximum discharge, that of Mar. 17, 1936; minimum, 0.4 second-foot Sept. 7, 12-14, 1930.

Remarks.- Records fair except those for periods of ice effect, Dec. 4-7, Dec. 22 to Jan. 4, Jan. 14 to Mar. 5, which are poor and were determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations in adjacent drainage areas. Slight regulation from power operations upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	48	137	371	165	98	1,600	723	258	87	153	7.0	54		
2	141	120	321	130	96	1,600	940	266	81	71	6.0	39		
3	93	105	293	210	96	1,550	940	371	71	49	5.1	36		
4	74	96	250	250	98	1,500	847	398	67	34	4.3	28		
5	67	93	220	293	90	3,500	684	371	56	28	4.2	23		
6	54	151	200	321	86	3,160	1,540	346	50	22	355	16		
7	50	124	190	293	94	2,200	2,020	316	45	20	190	14		
8	46	181	230	230	82	1,030	1,540	204	92	15	85	12		
9	42	174	483	279	80	696	1,150	241	79	12	30	11		
10	42	170	684	274	78	945	990	216	67	11	26	10		
11	42	201	762	274	76	4,460	1,150	201	65	9.6	36	7.6		
12	42	242	694	261	76	11,500	1,270	209	81	9.1	22	6.5		
13	39	894	612	256	76	5,610	1,210	183	61	9.1	13	6.0		
14	36	1,040	684	280	80	3,010	940	179	54	3.6	29	5.7		
15	39	514	804	230	88	1,580	762	147	50	6.0	15	5.7		
16	36	454	1,270	210	92	3,460	612	133	56	3.3	39	5.7		
17	36	425	1,040	190	96	13,700	545	125	49	1.3	92	6.0		
18	33	371	804	180	92	18,500	454	110	54	3.3	40	7.0		
19	39	302	684	170	88	8,200	371	232	63	2.8	50	9.1		
20	38	293	514	160	82	4,980	346	201	58	2.8	159	7.0		
21	36	265	398	150	74	3,230	346	166	49	2.8	97	6.0		
22	42	239	330	140	70	2,380	371	147	33	2.5	50	5.7		
23	56	205	270	135	70	1,760	303	139	24	2.5	38	5.4		
24	46	181	220	130	70	1,930	234	133	24	25	32	5.7		
25	40	189	200	125	80	2,930	266	136	23	39	26	10		
26	39	170	185	120	150	3,880	275	120	22	17	26	21		
27	36	174	175	115	350	3,430	254	144	21	14	24	11		
28	33	283	170	110	700	3,060	249	125	24	12	19	10		
29	57	398	165	105	1,600	2,230	303	110	22	15	49	7.0		
30	215	398	160	105		1,640	258	101	79	14	115	10		
31	162		160	100		1,310		92		11	67			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October.....					215		33		58.0		0.206		0.24	
November.....					1,040		93		286		1.02		1.14	
December.....					1,270		160		437		1.56		1.30	
January.....					321		100		195		.694		.30	
February.....					1,600		70		169		.601		.65	
March.....					18,500		696		3,879		15.8		18.91	
April.....					2,020		249		731		2.60		2.20	
May.....					398		92		200		.712		.32	
June.....					92		21		53.6		.191		.21	
July.....					153		1.8		20.2		.072		.03	
August.....					355		4.2		56.4		.201		.23	
September.....					54		5.4		15.3		.047		.05	
The year.....					18,500		1.8		513		1.93		24.93	

SUSQUEHANNA RIVER BASIN

North Bald Eagle Creek at Beech Creek Station, Pa.

Location. - Water-stage recorder, lat. $41^{\circ}3'55''$, long. $77^{\circ}34'0''$, at highway bridge just below mouth of Beech Creek, at Beech Creek Station, Clinton County. Zero of gage is 571.79 feet above mean sea level.

Drainage area.- 559 square miles.

Records available.- October 1918 to September 1921, October 1931 to September 1936 in reports of U. S. Geological Survey; June 1910 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.—26 years, 791 second-feet.

Extremes.— Maximum discharge during year, 22,300 second-foot Mar. 18 (gage height, 14.42 feet) from rating curve extended above 10,000 second-foot; minimum, 94 second-foot Oct. 12 (gage height, 1.35 feet); minimum daily discharge, 122 second-foot Oct. 12.

1910-36: Maximum discharge, that of Mar. 18, 1936; minimum, 15 second-foot
Jan. 9, 1931 (gage height, 1.12 feet); minimum daily discharge (estimated), 25
second-foot Jan. 22, 23, 1931.

Remarks.- Records fair except those for periods of ice effect, Dec. 5-8, Dec. 22 to Jan. 7, Jan. 19 to Feb. 29, which are poor and were determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Some regulation at low stages from operation of gristmills upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	136	153	256	350	200	2,300	1,540	528	291	273	162	200		
2	165	142	240	350	195	2,030	1,780	514	286	235	168	182		
3	156	136	243	420	190	1,660	1,780	535	273	220	157	180		
4	145	131	214	650	195	1,420	1,480	521	264	216	163	176		
5	139	131	180	600	200	2,700	1,420	497	260	220	176	166		
6	139	136	170	460	195	3,240	3,570	468	256	209	234	170		
7	133	142	170	400	190	2,680	3,240	449	256	202	229	154		
8	133	145	210	383	185	2,360	2,550	430	305	188	183	156		
9	133	148	300	377	180	2,210	2,100	418	296	188	172	161		
10	131	142	389	424	175	2,950	2,220	406	284	178	178	155		
11	136	142	716	418	175	6,000	2,030	395	269	178	277	152		
12	122	139	810	412	170	13,100	1,960	468	368	191	212	150		
13	128	1,730	733	418	170	8,020	1,900	436	394	191	180	152		
14	126	1,040	2,100	462	180	4,590	1,660	442	585	135	169	153		
15	126	542	2,220	449	200	3,910	1,540	406	401	182	292	152		
16	126	406	2,160	468	230	5,410	1,420	389	335	178	227	155		
17	128	383	1,600	449	210	10,800	1,260	377	305	173	270	152		
18	126	412	1,310	449	200	18,200	1,150	366	305	175	198	154		
19	123	350	1,060	500	190	13,500	1,040	424	350	175	175	144		
20	123	324	882	460	180	9,880	957	418	296	175	186	144		
21	126	300	693	390	175	7,130	900	366	273	178	186	144		
22	126	282	580	360	170	5,170	837	350	256	182	168	140		
23	131	260	510	330	170	3,920	734	340	252	182	171	142		
24	131	235	470	310	175	3,350	701	335	248	213	254	140		
25	133	228	430	290	190	3,040	653	335	243	213	248	148		
26	131	248	400	270	250	2,760	630	319	235	195	206	142		
27	131	231	380	250	600	2,870	600	335	228	191	186	140		
28	131	256	370	240	1,500	2,700	570	340	231	202	180	140		
29	191	300	360	230	2,800	2,270	563	319	220	198	283	163		
30	269	277	350	220		2,040	549	300	260	188	290	224		
31	188		350	210		1,790		300		182	220			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October					269		122		141		0.252		0.29	
November					1,730		131		316		.565		.63	
December					2,220		170		673		1.20		1.38	
January					650		210		387		.692		.80	
February					2,800		170		339		.606		.65	
March					13,200		1,420		4,958		8.87		10.23	
April					3,570		549		1,444		2.58		2.88	
May					535		300		404		.723		.83	
June					585		220		294		.526		.59	
July					273		175		196		.351		.40	
August					292		157		206		.369		.45	
September					224		140		158		.283		.32	
The year					18,200		122		798		1.43		19.43	

SUSQUEHANNA RIVER BASIN

Pine Creek at Cedar Run, Pa.

Location.— Water-stage recorder, lat. 41°31'20", long. 77°26'55", at highway bridge at Cedar Run, Lycoming County, about 2,000 feet below mouth of Cedar Run. Zero of gage is 781.96 feet above mean sea level.

Drainage area.- 604 square miles.

Records available.- October 1918 to September 1921, October 1931 to September 1936 in reports of U. S. Geological Survey; July 1918 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 17 years (1919-36), 737 second-feet.

Extremes.— Maximum discharge (during year, 30,900 second-foot Mar. 18 (gage height, 11.39 feet) from rating curve extended on basis of slope-area determination; minimum, 35 second-foot Aug. 4 (gage height, 1.04 feet).

1918-36: Maximum discharge, that of Mar. 18, 1936; minimum, 5.1 second-feet Sept. 6, 1929 (gauge height, 0.86 foot).

Remarks.—Records good except those for period of recorder failure and for periods of ice effect, which are poor. Discharge for period of recorder failure, Nov. 19-30, determined by comparison with records for stations in adjacent drainage areas. Discharge for periods of ice effect, Dec. 4-13, Dec. 24 to Jan. 4, Jan. 21 to Mar. 11, determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations mentioned above.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	88	313	448	350	320	780	4,120	587	265	153	54	270
2	172	263	433	350	310	700	3,560	571	243	137	46	232
3	162	234	412	400	310	760	3,140	791	226	108	41	205
4	124	212	390	800	320	900	2,450	370	221	98	37	181
5	107	201	380	1,070	320	1,000	2,120	910	200	94	41	153
6	99	223	370	925	310	850	3,150	360	181	80	634	137
7	92	212	370	903	310	900	3,340	770	176	74	429	124
8	85	223	390	850	310	780	3,030	689	191	65	216	112
9	82	257	500	780	310	780	2,450	620	226	60	145	103
10	79	234	450	820	300	1,000	2,200	563	181	57	131	94
11	75	234	470	743	300	9,000	2,270	515	267	72	542	81
12	72	257	450	680	300	17,000	2,290	478	563	130	429	84
13	75	1,990	450	629	300	9,080	2,450	464	530	112	324	80
14	72	1,620	816	587	310	5,120	2,150	449	270	91	253	77
15	65	1,190	1,290	571	310	4,130	1,950	388	226	74	282	71
16	60	969	1,560	563	300	7,850	1,740	355	191	62	226	136
17	60	840	1,270	492	300	14,300	1,500	330	167	57	181	193
18	60	761	1,020	440	290	22,600	1,280	317	191	51	153	151
19	60	663	881	478	280	14,800	1,100	457	237	51	141	116
20	60	680	780	400	280	11,000	970	526	101	48	145	103
21	60	720	646	380	280	7,920	900	389	153	46	176	91
22	60	620	604	370	280	5,620	900	342	132	46	462	84
23	68	540	555	360	280	4,530	752	324	116	48	302	77
24	82	440	500	350	290	5,040	672	324	103	40	464	77
25	79	400	460	350	310	7,130	612	349	103	80	324	80
26	68	380	440	340	350	9,120	579	317	105	77	324	81
27	62	370	420	340	420	8,360	547	374	105	62	265	73
28	60	460	400	330	500	8,840	515	308	116	57	211	63
29	115	700	380	330	600	6,480	620	324	112	57	356	68
30	941	435	370	320		5,430	587	299	132	65	422	66
31	446		360	320		5,510		282		65	324	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October.....	941	60	122	0.202	0.23
November.....	1,990	201	557	.222	1.03
December.....	1,560	360	589	.975	1.12
January.....	1,070	320	536	.897	1.02
February.....	600	280	324	.536	.58
March.....	22,600	700	6,362	10.5	12.11
April.....	4,120	515	1,797	2.98	3.32
May.....	910	282	491	.213	.94
June.....	568	105	198	.323	.37
July.....	153	40	74.7	.124	.14
August.....	634	37	261	.432	.50
September.....	270	65	116	.192	.21
The year.....	22,600	37	959	1.59	21.57

Lycoming Creek near Trout Run, Pa.

Location.- Chain gage, lat. $41^{\circ}25'5''$, long. $77^{\circ}2'0''$, at highway bridge half a mile below mouth of Grays Run and $2 \frac{3}{4}$ miles above Trout Run, Lycoming County. Zero of gage is 693.4 feet above mean sea level.

Drainage area.- 173 square miles.

Records available.- October 1919 to September 1921, October 1931 to September 1936 in reports of U. S. Geological Survey; December 1913 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 19 years (1914-16, 1919-36), 260 second-feet.

Extremes.— Maximum discharge during year, 17,000 second-foot Mar. 18 (gage height, 17.34 feet, from floodmarks) from rating curve extended on basis of slope-area determination; minimum, 3.2 second-foot Sept. 27 (gage height, 1.28 feet); minimum daily discharge, 4.0 second-foot Sept. 19-24, 27, 28.

1913-36: Maximum discharge, that of Mar. 18, 1936; minimum, that of Sept. 27, 1936; minimum daily discharge, that of Sept. 19-24, 27, 28, 1936.

Remarks.—Records poor. Discharge for periods of missing gage heights, Oct. 19, Dec. 17-20, June 30, July 29, determined by comparison with records for stations in adjacent drainage area. Discharge for periods of ice effect, Dec. 23 to Jan. 3, Jan. 20 to Feb. 29, determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations mentioned above. Discharge for high stages determined from graphs based on twice-daily gage readings.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	107	221	120	79	253	507	158	73	55	9.9	44
2	20	88	194	120	78	183	526	150	71	36	9.9	35
3	20	75	185	180	80	224	488	346	67	38	11	31
4	25	64	177	267	82	212	397	469	63	33	11	26
5	21	59	163	243	81	367	363	363	56	36	11	22
6	20	75	150	212	80	318	835	314	53	33	23	19
7	18	68	130	185	79	284	745	282	42	23	38	16
8	19	75	137	169	78	285	625	252	50	25	32	14
9	17	77	234	169	78	262	546	231	63	21	23	12
10	17	73	215	180	77	324	546	205	51	21	24	11
11	17	70	256	177	76	2,880	585	180	46	21	65	10
12	19	70	227	166	75	6,590	585	177	197	31	54	9.6
13	19	2,320	221	153	76	2,250	585	164	69	32	38	8.8
14	17	1,470	432	153	78	1,300	507	156	94	28	38	7.2
15	17	615	690	153	80	1,120	450	146	82	27	30	6.4
16	17	478	790	153	79	2,180	432	123	65	23	33	5.6
17	17	388	600	147	78	5,550	380	92	55	19	32	5.6
18	17	346	460	140	77	8,320	346	88	74	17	27	4.8
19	18	322	370	109	76	3,380	330	188	78	18	26	4.0
20	17	326	300	100	75	2,310	298	161	58	16	24	4.0
21	18	346	253	95	74	1,620	267	126	55	15	30	4.0
22	20	292	221	93	73	1,270	267	112	44	15	70	4.0
23	22	256	190	90	73	1,100	228	99	40	17	61	4.0
24	25	203	170	86	74	1,130	208	94	39	17	50	4.0
25	27	188	155	84	78	1,140	194	150	39	14	39	5.6
26	24	185	145	83	85	1,160	180	112	58	12	35	5.6
27	25	177	140	82	110	1,170	169	133	39	16	30	4.0
28	24	215	135	82	150	1,020	161	121	39	13	27	4.0
29	30	367	130	82	210	828	158	101	39	14	32	8.8
30	535	250	125	81		696	161	92	45	15	44	9.6
31	206		120	80		628		82		11	61	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					535	17	42.8	0.247		0.28		
November					2,320	59	322	1.86		2.08		
December					790	120	256	1.48		1.71		
January					267	80	137	.792		.91		
February					210	73	85.8	.496		.53		
March					8,320	183	1,624	9.39		10.83		
April					835	158	402	2.32		2.59		
May					469	82	176	1.02		1.18		
June					197	38	60.8	.351		.39		
July					55	11	25.1	.134		.15		
August					70	9.9	33.5	.194		.22		
September					44	4.0	11.7	.068		.08		
The year					8,320	4.0	266	1.54		20.95		

Loyalsock Creek at Loyalsock, Pa.

Location.- Water-stage recorder, lat. 41°19'25", long. 76°54'40", at highway bridge at Loyalsock, Lycoming County. Zero of gage is 585.63 feet above mean sea level. Drainage area, 413 square miles.

Drainage area.- 443 square miles.

Records available.— October 1931 to September 1936 in reports of U. S. Geological Survey; July 1925 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.-11 years, 696 second-feet.

Extremes: - Maximum discharge during year, 30,300 second-feet Mar. 18 (gage height, 11.58 feet, from floodmark in gage shelter) from rating curve extended above 8,000 second-feet; minimum, 28 second-feet Sept. 19, 22, 24.

8,000 second-feet; minimum, 28 second-feet Sept. 19, 22, 24.
1925-36: Maximum discharge, 34,000 second-feet Nov. 16, 1926 (gage height, 12.3 feet) from rating curve extended above 8,000 second-feet; minimum, 16 second-feet Sept. 18, 19, 22-25, 1932 (gage height, 2.57 feet).

Remarks.- Records poor. Discharge for periods of ice effect, Dec. 5-8, Dec. 21 to Jan. 5, Jan. 19 to Mar. 12, determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Record for period of recorder failure, Apr. 1-16, based on daily gage readings.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	48	324	1,120	450	390	1,800	1,100	641	236	168	47	80
2	57	223	930	450	380	1,600	1,030	556	214	157	44	70
3	57	175	798	700	390	1,500	1,280	830	196	150	44	64
4	57	148	700	1,500	400	1,600	1,020	854	172	183	44	56
5	55	130	620	2,000	410	2,200	842	693	157	168	42	49
6	50	130	580	1,660	400	1,900	2,010	594	143	140	54	47
7	45	264	540	1,520	390	1,800	3,620	522	133	120	54	44
8	40	228	520	1,290	380	1,700	2,510	480	129	106	58	42
9	38	212	537	1,250	370	1,700	1,320	424	140	94	60	39
10	38	186	732	1,590	360	2,000	1,680	386	133	84	65	36
11	38	170	853	1,520	350	4,500	1,680	344	136	84	94	36
12	38	157	853	1,280	350	15,000	1,710	322	146	82	118	36
13	38	6,150	776	977	350	7,060	1,620	328	150	90	100	35
14	43	4,540	1,750	680	360	4,270	1,370	540	180	92	84	33
15	43	2,170	1,910	583	400	3,810	1,340	452	168	84	90	33
16	40	1,440	2,090	620	450	5,710	1,310	356	136	74	100	35
17	43	1,130	1,700	601	450	12,200	1,180	317	120	70	94	33
18	38	1,030	1,310	579	430	19,200	1,010	285	135	66	82	30
19	38	886	1,130	560	400	9,910	890	370	962	64	72	30
20	40	951	978	550	370	6,600	794	660	508	58	68	30
21	38	1,280	760	540	360	6,920	737	452	322	58	64	30
22	43	1,090	650	530	350	5,490	770	356	240	68	80	31
23	50	897	600	510	340	3,730	704	312	200	60	82	30
24	53	732	550	480	350	3,220	594	280	180	62	70	31
25	65	650	520	460	370	2,760	531	374	209	60	66	32
26	71	601	500	450	450	2,270	480	374	200	56	70	31
27	65	564	480	440	600	2,300	445	322	168	58	66	31
28	57	702	470	430	900	2,410	417	368	160	56	62	31
29	71	2,540	460	420	1,400	1,560	398	317	153	56	80	35
30	677	1,480	450	410		1,370	404	275	153	52	84	42
31	583		450	400		1,100		255		49	84	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October.....					677	38	85.7	0.193		0.22		
November.....					6,150	130	1,039	2.35		2.62		
December.....					2,090	450	849	1.92		2.21		
January.....					2,000	400	820	1.95		2.13		
February.....					1,400	340	445	1.00		1.09		
March.....					19,200	1,100	4,490	10.1		11.64		
April.....					3,620	398	1,177	2.66		2.97		
May.....					854	255	440	.993		1.14		
June.....					962	120	209	.472		.53		
July.....					188	49	89.5	.202		.23		
August.....					118	42	71.7	.162		.19		
September.....					80	30	39.4	.089		.10		
The year.....					19,200	30	817	1.84		25.06		

Frankstown Branch of Juniata River at Williamsburg, Pa.

Location.— Water-stage recorder, lat. 40°27'45", long. 78°12'0", at highway bridge at Williamsburg, Blair County. Zero of gage is 831.78 feet above mean sea level.

Drainage area.— 291 square miles.

Records available.— October 1919 to September 1921, October 1931 to September 1936 in reports of U. S. Geological Survey; October 1916 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.— 17 years (1919-36), 384 second-feet.

Extremes.— Maximum discharge during year, 47,600 second-feet Mar. 18 (gage height, 18.58 feet, from floodmark in gage shelter) from rating curve extended on basis of slope-area determination; minimum, 27 second-feet Sept. 19; minimum daily discharge, 41 second-feet Sept. 20.

1916-36: Maximum discharge, that of Mar. 18, 1936; minimum, 13 second-feet July 24, 1934 (gage height, 0.97 foot); minimum daily discharge (estimated), 31 second-feet Dec. 24, 25, 1930.

Maximum stage known, 19.1 feet, from floodmark, June 1, 1889 (discharge, about 35,500 second-feet).

Remarks.— Records fair. Discharge for period of missing gage height record, Jan. 24-29, determined by comparison with records for station in adjacent drainage areas. Regulation at low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	33	74	103	149	151	2,350	804	247	122	143	69	122
2	65	71	104	145	183	1,790	1,020	234	115	122	66	104
3	64	70	97	205	163	1,170	958	249	110	112	62	143
4	59	70	80	306	172	1,200	815	244	107	114	64	112
5	60	69	57	301	176	2,900	749	222	107	107	74	97
6	61	71	102	244	157	2,650	3,180	212	108	90	137	89
7	63	73	91	246	155	1,790	2,120	203	112	74	93	34
8	63	85	95	249	149	1,450	1,450	190	120	73	74	75
9	65	78	164	277	142	1,490	1,270	175	127	70	67	72
10	60	78	191	442	145	2,040	1,730	173	122	68	63	68
11	60	74	248	377	142	3,960	1,390	137	132	72	62	67
12	64	79	244	346	140	6,780	1,280	175	202	68	62	68
13	64	917	253	343	142	3,400	1,120	175	158	69	61	79
14	66	394	1,050	459	144	1,970	1,000	126	198	63	125	92
15	63	234	925	377	164	1,970	954	158	152	66	100	75
16	63	181	930	380	191	2,290	856	151	110	65	80	67
17	61	172	642	353	204	11,600	771	152	101	66	67	81
18	61	168	483	372	207	25,000	706	151	110	65	59	62
19	59	142	405	401	178	10,900	664	175	335	65	65	62
20	61	138	343	283	137	4,210	623	169	160	65	116	41
21	62	135	196	413	181	3,900	583	147	125	65	85	63
22	60	124	188	403	172	2,350	564	133	104	69	120	64
23	67	114	236	219	162	1,750	503	130	96	67	86	57
24	67	98	227	210	162	1,540	458	125	97	157	200	58
25	56	100	193	250	172	1,460	378	125	103	102	110	65
26	64	107	152	260	581	1,400	297	125	99	72	89	65
27	63	101	144	250	1,770	1,750	288	143	97	167	133	56
28	65	111	153	240	2,430	1,550	277	147	103	190	100	52
29	94	133	145	250	2,120	1,230	268	130	108	101	404	127
30	126	117	144	232		1,120	260	127	110	86	339	295
31	85	158	211			1,010		125		75	164	
Month	Maximum		Minimum		Mean		Per square mile		Run-off in inches			
October	126		56		66.2		0.227		0.26			
November	917		69		146		.502		.56			
December	1,050		57		277		.952		1.10			
January	442		145		295		1.01		1.16			
February	2,430		140		383		1.32		1.42			
March	25,000		1,010		3,561		12.2		14.07			
April	3,180		260		914		3.14		3.50			
May	249		125		170		.584		.67			
June	335		96		128		.440		.49			
July	190		65		90.7		.512		.56			
August	404		59		111		.381		.44			
September	295		41		85.4		.293		.33			
The year	25,000		41		522		1.79		24.36			

Juniata River at Newport, Pa.

Location.— Water-stage recorder, lat. 40°28'45", long. 77°7'45", at highway bridge at Newport, Perry County, 1,000 feet above mouth of Little Buffalo Creek. Zero of gage is 363.16 feet above mean sea level.

Drainage area.— 3,354 square miles.

Records available.— March 1899 to December 1913, October 1918 to September 1921, October 1923 to September 1926, October 1931 to September 1936 in reports of U. S. Geological Survey; March 1899 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.— 35 years (1899-1905, 1907-36), 4,436 second-feet.

Extremes.— Maximum discharge during year, 215,000 second-feet Mar. 19 (gage height, 34.24 feet, from floodmark in gage shelter) from rating curve extended on basis of slope-area determination; minimum, 280 second-feet Oct. 26 (gage height, 2.72 feet); minimum daily discharge, 310 second-feet Oct. 26.

1899-1936: Maximum discharge, that of Mar. 19, 1936; minimum (estimated), 260 second-feet Aug. 27, 1925 (gage height, 2.71 feet); minimum daily discharge, 286 second-feet Sept. 25, 1932.

Maximum stage known, 35.9 feet, from floodmarks, June 1, 1889 (discharge, about 237,000 second-feet).

Remarks.— Records fair. Discharge for periods of ice effect, Dec. 29 to Jan. 15, Jan. 24 to Feb. 29, determined from gage heights, weather records, and by comparison with records for stations upstream. Discharge for period of recorder failure, Apr. 1-9, based on twice-daily gage readings. Slight regulation at low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	554	1,480	1,560	1,270	2,150	21,700	8,460	3,320	1,340	1,340	1,650	3,780
2	567	1,130	1,440	1,240	2,100	19,600	7,860	3,110	1,300	1,220	1,210	2,410
3	644	950	1,250	1,220	2,050	17,000	8,160	3,060	1,260	1,300	1,050	1,760
4	592	823	1,200	1,200	2,000	13,200	7,560	3,240	1,170	1,370	894	1,410
5	567	747	1,030	2,000	1,950	15,300	6,690	3,110	1,130	1,390	720	1,170
6	592	644	1,050	3,500	1,900	24,900	12,700	3,090	1,050	1,320	814	1,050
7	541	631	1,230	3,000	1,860	21,300	24,900	2,930	1,030	1,130	878	720
8	515	644	1,030	2,900	1,820	16,400	22,900	2,720	1,010	961	961	766
9	493	618	1,280	2,900	1,780	14,000	16,200	2,480	1,030	814	961	720
10	471	605	1,230	3,200	1,740	16,400	15,400	2,410	1,150	798	798	705
11	504	631	2,100	5,500	1,720	28,800	16,900	2,310	1,190	846	846	660
12	504	673	2,980	6,000	1,710	69,000	15,100	2,200	1,150	798	830	675
13	504	8,650	3,400	4,800	1,700	66,300	13,400	2,950	1,190	675	927	630
14	493	7,000	6,070	4,200	1,700	37,100	11,500	2,980	1,790	690	782	600
15	504	5,480	10,600	4,100	1,800	23,100	10,300	3,090	4,520	630	675	630
16	493	3,940	11,200	4,340	2,000	19,100	9,060	2,680	3,360	600	660	660
17	471	3,400	10,600	4,340	2,300	30,000	8,160	2,330	2,300	600	814	645
18	482	3,520	8,480	4,080	2,600	116,000	7,420	2,130	1,900	544	862	600
19	471	3,200	6,530	4,080	2,500	191,000	6,690	2,080	3,640	530	705	544
20	460	2,750	5,180	3,220	2,300	95,700	6,260	2,170	4,540	498	660	530
21	450	2,380	4,210	2,790	2,200	49,300	5,680	2,240	3,190	533	615	530
22	460	2,140	3,220	3,170	2,150	35,500	5,250	2,080	2,360	766	645	530
23	439	1,880	2,700	3,500	2,100	24,500	4,970	1,800	1,940	558	750	516
24	353	1,610	2,020	3,200	2,050	18,400	4,610	1,710	1,510	572	894	434
25	326	1,540	2,170	2,900	2,000	15,500	4,300	1,550	1,390	675	1,030	460
26	310	1,300	2,210	2,800	4,000	13,700	4,000	1,510	1,260	846	1,260	474
27	406	1,300	1,610	2,600	12,000	12,500	3,810	1,510	1,240	995	1,100	460
28	439	1,410	1,390	2,500	30,000	13,200	3,670	1,570	1,170	1,100	846	460
29	807	1,710	1,450	2,400	25,000	12,200	3,480	1,430	1,050	1,820	1,050	447
30	3,860	1,500	1,400	2,300		10,700	3,430	1,490	1,210	1,860	1,790	600
31	2,000		1,300	2,200		9,680		1,370		1,670	3,010	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					3,960	310	654	0.195		0.22		
November					8,650	605	2,143	.639		.71		
December					11,200	1,030	3,326	.992		1.14		
January					6,000	1,200	3,140	.936		1.08		
February					30,000	1,700	4,179	1.25		1.35		
March					191,000	9,680	34,550	10.3		11.87		
April					24,900	3,430	9,291	2.77		3.09		
May					3,320	1,370	2,337	.697		.80		
June					4,540	1,010	1,778	.530		.59		
July					1,860	498	950	.283		.33		
August					3,010	615	990	.295		.34		
September					3,780	434	853	.254		.28		
The year					191,000	310	5,376	1.60		21.80		

SUSQUEHANNA RIVER BASIN

Raystown Branch of Juniata River at Saxton, Pa.

Location.— Water-stage recorder, lat. 40°12'55", long. 78°15'55", at highway bridge half a mile west of Saxton, Bedford County. Zero of gage is 794.73 feet above mean sea level.

Drainage area.— 756 square miles.

Records available.— October 1918 to September 1921, October 1931 to September 1936 in reports of U. S. Geological Survey; August 1911 to September 1936 in reports of Pennsylvania Department of Forests and Waters. Records prior to October 1931 obtained at a site 0.8 mile downstream.

Average discharge.— 25 years, 936 second-feet.

Extremes.— Maximum discharge during year, 80,500 second-feet Mar. 18 (gage height, 24.54 feet, from floodmark in gage shelter) from rating curve extended on basis of slope-area determination; minimum, 94 second-feet July 23 (gage height, 1.12 feet); minimum daily discharge, 103 second-feet July 19.

1911-36: Maximum discharge, that of Mar. 18, 1936; minimum, 52 second-feet Oct. 17, 18, 1930.

Remarks.— Records good except those for high stages, which are fair, and those for period of ice effect, Dec. 24 to Feb. 28, which are poor and were determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations in adjacent drainage areas.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	134	250	256	370	470	6,180	1,640	527	235	189	280	581
2	140	194	228	360	450	5,270	1,530	497	224	209	219	431
3	127	171	215	360	420	3,560	1,480	497	214	219	180	356
4	127	153	226	350	460	3,070	1,280	666	203	198	158	310
5	124	153	256	780	450	6,770	1,150	596	189	176	158	292
6	127	147	291	700	440	6,950	4,480	504	184	166	193	246
7	124	144	205	660	430	5,100	7,490	482	176	150	235	209
8	130	153	224	640	420	3,730	4,430	445	184	146	246	189
9	127	150	224	700	410	3,680	3,140	417	224	139	219	180
10	130	157	240	800	400	5,109	3,650	396	224	136	176	166
11	134	157	353	1,400	390	9,070	3,140	375	224	128	153	158
12	144	164	365	1,000	380	16,900	2,860	375	659	125	139	150
13	134	458	424	900	370	11,300	2,460	396	895	122	132	153
14	134	1,700	995	900	400	5,660	1,970	417	904	122	136	158
15	144	962	2,460	1,000	460	4,310	1,740	396	528	118	132	153
16	140	643	2,720	970	650	5,660	1,530	362	362	115	136	184
17	134	523	2,310	930	700	16,500	1,500	342	286	115	128	166
18	127	508	1,580	880	660	58,600	1,180	323	323	112	128	158
19	124	471	1,210	840	620	20,700	1,070	330	642	103	158	150
20	124	403	972	800	580	9,860	976	330	632	106	176	136
21	112	378	656	760	560	7,580	898	330	380	109	173	136
22	124	352	646	720	540	5,250	831	275	292	112	342	136
23	134	318	700	690	520	3,850	789	269	246	106	288	128
24	127	280	620	660	510	3,200	707	257	224	156	246	132
25	121	246	530	630	540	3,470	651	251	209	145	184	142
26	124	246	498	600	1,000	2,860	612	240	209	170	158	136
27	124	251	450	570	6,000	2,760	596	251	198	410	932	128
28	118	246	420	540	9,000	3,210	573	251	194	536	525	128
29	171	241	400	520	6,760	2,520	573	269	184	682	1,060	128
30	215	256	390	500		2,190	558	263	176	481	1,560	139
31	266		380	480		1,900		246		443	931	
Month	Maximum		Minimum		Mean		Per square mile		Run-off in inches			
October	266		112		138		0.183		0.21			
November	1,700		144		349		.462		.52			
December	2,720		205		692		.915		1.05			
January	1,400		350		710		.939		1.08			
February	9,000		370		1,207		1.60		1.73			
March	58,600		1,900		7,960		10.5		12.11			
April	7,490		558		1,843		2.44		2.72			
May	666		240		373		.493		.57			
June	904		176		328		.434		.48			
July	682		103		201		.266		.31			
August	1,560		128		319		.422		.49			
September	581		128		195		.258		.29			
The year	58,600		103		1,198		1.58		21.56			

SUSQUEHANNA RIVER BASIN

Dunning Creek at Yount, Pa.

Location.— Chain gage, lat. 40°3'30", long. 78°28'30", at highway bridge at Yount, Bedford County, 3 miles above mouth and 3½ miles northeast of Bedford. Zero of gage is 1,046.43 feet above mean sea level.

Drainage area.— 191 square miles.

Records available.— October 1931 to September 1936 in reports of U. S. Geological Survey; November 1929 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Extremes.— Maximum discharge during year (estimated), 17,900 second-feet Mar. 18 (gage height, 18.08 feet, from floodmark affected by backwater from Raystown Branch of Juniata River); minimum, 13 second-feet July 17, 19 (gage height, 0.49 foot).

1929-36: Maximum discharge, that of Mar. 18, 1936; minimum, 4.9 second-feet July 28, 1930 (gage height, 0.46 foot).

Remarks.— Records fair except those for high stages and for period of ice effect, which are poor. Discharge for period of ice effect, Dec. 22 to Feb. 29, determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations in adjacent drainage areas. Discharge for period of backwater effect, Mar. 17-19, determined by comparison with records for stations mentioned above. Discharge for high stages determined from graphs based on twice-daily gage readings. Slight regulation at low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	29	34	61	112	127	2,090	370	99	40	45	30	132		
2	30	32	58	110	125	1,220	370	92	38	34	26	96		
3	30	30	50	108	123	800	326	105	37	26	24	106		
4	28	29	47	320	121	820	273	99	36	25	22	74		
5	28	28	55	300	119	1,900	248	89	33	22	25	57		
6	33	28	54	270	117	1,740	2,700	82	32	22	92	50		
7	31	29	60	250	115	1,170	1,680	79	34	20	51	44		
8	31	38	54	240	113	982	935	74	40	19	32	40		
9	30	33	117	300	111	1,120	692	71	48	18	25	37		
10	28	30	124	450	110	1,570	1,060	67	41	18	23	36		
11	28	30	168	340	109	2,910	890	65	107	17	23	33		
12	31	34	156	260	108	3,810	770	70	179	15	21	31		
13	29	978	186	260	107	2,000	585	70	138	15	21	39		
14	29	528	774	320	125	1,170	480	74	91	15	20	54		
15	30	286	882	260	150	1,030	445	65	62	15	24	39		
16	29	205	970	240	170	1,360	355	60	39	15	20	33		
17	28	192	690	220	190	6,760	312	57	31	13	20	31		
18	28	143	463	210	180	8,980	273	55	34	15	19	28		
19	28	115	373	200	160	5,300	236	65	252	15	40	28		
20	28	115	300	190	155	2,600	212	62	78	15	41	26		
21	29	97	192	180	150	1,960	190	53	48	15	27	25		
22	29	89	170	170	145	1,180	179	50	36	15	74	25		
23	30	76	190	165	143	866	156	49	32	15	39	25		
24	30	66	170	160	145	868	140	46	32	15	29	23		
25	29	63	150	155	170	826	130	46	30	40	41	27		
26	29	69	140	150	700	779	123	45	28	26	40	26		
27	28	68	130	145	2,000	1,030	117	45	26	222	150	24		
28	28	72	125	141	3,000	901	117	45	26	98	58	22		
29	37	84	120	137	2,300	707	115	45	24	61	886	22		
30	78	68	117	133		569	108	42	26	64	424	31		
31	42		115	130		457		42		37	201			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October					78		28		31.5		0.165		0.19	
November					978		28		123		.644		.72	
December					970		47		234		1.23		1.42	
January					450		108		214		1.12		1.29	
February					3,000		107		393		2.06		2.22	
March					8,980		457		1,919		10.0		11.53	
April					2,700		108		486		2.54		2.83	
May					105		42		64.8		.339		.39	
June					252		24		56.5		.296		.33	
July					222		13		33.9		.177		.20	
August					886		19		82.8		.434		.50	
September					132		22		42.1		.220		.25	
The year					8,980		13		308		1.61		21.87	

Brush Creek at Gapsville, Pa.

Location.- Water-stage recorder, lat. 39°57'20", long. 78°15'15", at highway bridge three-quarters of a mile northwest of Gapsville, Bedford County, and 5½ miles above confluence with Shaffer Creek. Zero of gage is 1,122.39 feet above mean sea level.

Drainage area.- 36.8 square miles.

Records available.- October 1931 to September 1936 in reports of U. S. Geological Survey; November 1929 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Extremes.- Maximum discharge during year, 3,520 second-feet Mar. 17 (gage height, 9.81 feet) from rating curve extended above 1,500 second-feet; minimum, 0.3 second-foot Sept. 20, 27.

1929-36: Maximum discharge, that of Mar. 17, 1936; minimum, 0.2 second-foot Aug. 28, Sept. 12, 20-23, 1932.

Remarks.—Records fair except those for period of recorder failure and for periods of ice effect, which are poor. Discharge for period of recorder failure, Nov. 8-13, determined by comparison with records for stations in adjacent drainage areas. Discharge for periods of ice effect, Dec. 21 to Jan. 9, Jan. 20 to Feb. 27, determined from gage heights, weather records, and by comparison with records for stations mentioned above. Regulation at low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	2.4	11	11	26	18	269	58	23	8.3	5.1	8.3	3.8		
2	4.2	10	7.7	27	17	207	58	23	7.0	3.5	4.7	3.1		
3	1.4	10	8.8	52	18	171	55	36	5.8	3.1	4.4	3.3		
4	3.3	7.6	10	55	21	266	46	36	5.5	2.4	4.4	2.9		
5	1.8	8.3	7.8	50	19	314	41	28	5.1	2.6	3.3	2.1		
6	3.1	7.9	8.4	45	18	301	375	27	4.7	2.1	5.5	1.8		
7	4.0	8.1	7.6	45	17	237	368	25	5.1	2.0	8.3	2.0		
8	3.3	11	14	40	16	195	285	25	7.0	1.5	5.5	2.0		
9	2.7	10	11	60	15	218	233	24	5.8	1.5	5.1	.6		
10	1.9	9	11	98	15	285	212	23	5.1	1.5	3.5	2.0		
11	2.3	8	16	67	14	646	192	21	11	1.6	3.1	1.0		
12	4.9	9	16	59	14	855	169	21	19	1.2	3.3	.9		
13	2.2	70	30	57	14	519	144	23	10	1.2	3.6	.7		
14	3.7	47	125	57	20	297	125	25	7.3	.9	3.3	1.8		
15	2.8	34	129	55	50	242	116	23	5.5	.9	2.6	2.0		
16	2.8	27	138	63	45	232	96	20	4.7	1.2	2.6	.4		
17	1.8	27	99	55	41	1,630	84	19	3.5	.9	3.1	1.7		
18	2.9	28	75	52	37	1,780	72	22	7.7	.9	2.1	.6		
19	4.5	26	59	52	34	823	62	26	16	.9	13	.9		
20	1.8	23	48	45	32	442	55	18	6.6	.9	7.7	.3		
21	3.1	20	43	40	31	375	50	16	4.7	.9	2.9	.4		
22	3.8	18	40	36	30	241	47	15	3.6	.6	.4	.8		
23	4.1	16	36	33	29	171	41	13	3.1	.6	.5	.9		
24	3.7	15	33	30	32	149	38	13	3.5	1.2	1.5	1.2		
25	3.7	14	31	27	45	127	34	11	4.4	2.9	1.5	.6		
26	2.1	13	30	25	300	103	33	11	3.3	1.7	53	1.7		
27	2.0	12	29	23	350	105	31	14	2.9	40	62	.3		
28	4.1	13.	28	22	550	93	28	13	2.6	24	6.2	.5		
29	23	14	27	21	402	81	27	11	2.4	17	34	.4		
30	27	12	27	20	291	73	26	11	2.9	18	16	.9		
31	14		26	19		68		9.6		13	7.0			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October.....					27		1.4		4.79		0.130		0.15	
November.....					70		7.6		18.0		.489		.55	
December.....					138		7.6		38.1		1.04		1.20	
January.....					98		19		43.7		1.19		1.37	
February.....					550		14		75.3		2.05		2.21	
March.....					1,780		68		372		10.1		11.64	
April.....					375		26		107		2.90		3.24	
May.....					36		9.6		20.2		.549		.63	
June.....					19		2.4		6.14		.167		.19	
July.....					40		.6		5.03		.137		.16	
August.....					62		.4		9.11		.248		.29	
September.....					3.8		.3		1.39		.038		.04	
The year.....					1,780		.3		58.5		1.59		21.67	

Great Trough Creek near Marklesburg, Pa.

Location.- Water-stage recorder, lat. $40^{\circ}21'0''$, long. $78^{\circ}7'50''$, at highway bridge half a mile above mouth and 3 miles southeast of Marklesburg, Huntington County. Zero of gage is 714.48 feet above mean sea level.

Drainage area.- 84.6 square miles.

Records available. - October 1931 to September 1936 in reports of U. S. Geological Survey; January 1930 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Extremes.—Maximum discharge during year, 9,580 second-feet Mar. 17 (gage height, 8.46 feet) from rating curve extended above 500 second-feet; minimum, 3.5 second-feet Sept. 28 (gage height, 0.59 foot).

1930-36: Maximum discharge, that of Mar. 17, 1936; minimum, 0.6 second-foot Sept. 22, 23, 1932, Sept. 3, 1934.

Remarks. - Records good except those for high stages and for period of ice effect, which are poor. Discharge for period of ice effect, Dec. 24 to Feb. 28, determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations in adjacent drainage areas. Some regulation at low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.6	19	32	39	31	670	190	50	18	25	9.6	17
2	8.0	16	30	41	30	502	190	48	17	18	8.0	13
3	9.4	14	27	70	29	375	182	50	16	16	6.7	15
4	7.8	13	22	130	29	430	144	56	14	31	6.2	13
5	6.8	12	23	100	30	656	131	52	14	16	6.6	9
6	8.2	12	25	70	29	602	588	46	13	13	7.5	8
7	8.8	12	24	65	28	470	583	42	12	11	7.9	7
8	8.2	12	25	60	27	389	454	38	13	9.6	8.0	6
9	8.2	16	32	75	26	454	381	38	15	8.8	6.4	5
10	7.8	14	36	180	25	682	537	37	14	8.2	5.3	5
11	7.2	13	43	130	24	1,410	448	38	15	7.5	5.1	5
12	7.0	13	52	110	23	2,730	381	52	18	6.7	9.4	5
13	8.2	105	59	100	23	1,150	326	46	18	6.2	8.0	6
14	7.4	116	296	115	27	676	273	48	31	6.9	6.0	7
15	6.8	63	370	130	40	595	238	43	27	5.8	5.3	7
16	7.3	51	361	105	80	637	203	40	17	6.6	5.0	6
17	6.9	51	234	90	70	3,800	174	37	13	5.1	5.4	5
18	7.2	63	158	80	69	6,450	167	34	18	5.0	7.6	4
19	6.5	58	125	75	74	2,380	127	37	65	5.1	6.7	4
20	7.3	56	104	70	67	1,020	115	40	44	5.3	26	4
21	6.8	51	69	65	60	879	105	34	26	5.4	13	4
22	7.6	46	57	60	55	625	97	30	18	4.8	23	4
23	7.8	42	58	56	50	483	82	27	15	4.8	18	4
24	8.4	44	52	52	48	412	77	25	15	8.6	12	4
25	7.3	50	48	49	46	383	71	25	15	13	9.0	4
26	7.0	33	45	46	70	302	67	23	14	9.8	8.6	3
27	7.6	32	43	43	300	342	63	25	12	46	41	4
28	7.0	33	41	40	1,000	328	59	27	12	71	18	3
29	16	39	40	37	774	266	54	22	15	23	91	3
30	49	37	39	35		240	52	21	14	26	72	5
31	30		38	33		216		19		15	27	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October.....					49	6.5	9.91	0.117		0.13		
November.....					116	12	37.9	.448		.50		
December.....					370	22	84.1	.994		1.15		
January.....					180	33	75.8	.896		1.03		
February.....					1,000	23	110	1.50		1.40		
March.....					6,450	216	936	11.7		13.49		
April.....					538	52	219	2.59		2.89		
May.....					56	19	37.1	.439		.51		
June.....					65	12	18.9	.223		.25		
July.....					71	4.8	14.3	.169		.19		
August.....					91	5.0	15.8	.187		.22		
September.....					17	3.8	6.67	.079		.09		
The year					6,450	3.8	135	1.60		21.85		

SUSQUEHANNA RIVER BASIN

Aughwick Creek near Orbisonia, Pa.

Location.- Chain gage, lat. 40°12'35", long. 77°55'30", at highway bridge 600 feet above East Broad Top Railroad bridge, 650 feet above mouth of Three Springs Creek, and 2½ miles southwest of Orbisonia, Huntingdon County. Zero of gage is 619.04 feet above mean sea level.

Drainage area.- 174 square miles.

Records available.- October 1931 to September 1936 in reports of U. S. Geological Survey; May 1915 to February 1916, January 1930 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Extremes.- Maximum discharge during year, 16,400 second-feet Mar. 18 (gage height, 19.16 feet, from floodmark) from rating curve extended above 10,500 second-feet; minimum, 5.5 second-feet July 20, 21 (gage height, 1.51 feet).

1915-16, 1930-36: Maximum discharge, that of Mar. 18, 1936; minimum, 3.8 second-feet Sept. 25-27, 1932.

Maximum stage known, 20.5 feet, from floodmark, June 1, 1889 (discharge, 18,400 second-feet from rating curve extended above 10,500 second-feet).

Remarks.- Records fair except those for period of ice effect, Dec. 23 to Mar. 4, which are poor and were determined from gage heights, weather records, two discharge measurements, and by comparison with records for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily gage readings. Some regulation at low stages from operation of gristmills upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	50	40	68	111	950	317	117	32	35	27	50
2	18	38	37	67	108	950	346	107	32	31	18	36
3	19	32	32	66	105	750	361	113	30	34	16	36
4	20	29	28	110	102	900	262	155	27	61	15	31
5	18	27	40	200	100	1,710	249	123	25	42	17	22
6	18	26	37	220	98	2,110	2,250	101	22	25	20	16
7	18	25	43	200	95	1,030	1,470	93	22	20	32	15
8	20	23	32	190	94	809	985	90	31	19	24	14
9	18	32	37	220	92	907	810	86	44	16	17	13
10	17	28	42	300	90	1,360	940	78	40	14	15	12
11	17	26	66	450	89	2,900	810	73	44	14	26	11
12	18	29	126	350	88	4,650	652	75	63	11	27	10
13	19	535	183	260	90	2,380	541	142	317	10	18	12
14	20	433	1,180	260	100	1,320	439	138	149	9.8	15	13
15	18	222	930	320	120	1,000	407	95	59	9.2	11	13
16	18	146	835	290	160	930	346	80	42	8.6	9.8	13
17	18	119	562	270	150	5,570	303	73	36	7.3	9.2	11
18	17	199	405	250	140	10,600	276	68	43	6.7	7.3	9.8
19	16	149	306	230	135	4,210	249	75	284	6.1	8.6	8.6
20	17	128	222	210	130	2,020	224	101	98	5.5	9.2	7.3
21	20	102	119	190	127	1,900	199	69	52	5.5	13	7.3
22	24	86	102	180	125	1,220	187	57	35	8	75	7.3
23	22	77	110	170	124	849	164	54	28	16	54	6.7
24	22	56	100	160	128	714	151	47	31	17	26	8.6
25	22	33	95	150	140	637	138	44	34	19	18	8.6
26	22	56	90	140	600	406	132	41	34	18	15	7.3
27	24	46	85	135	2,000	561	127	41	26	40	75	7.3
28	25	42	81	130	2,700	518	119	44	25	123	62	7.3
29	26	50	77	125	1,400	447	113	41	22	115	340	6.7
30	242	48	73	120		410	109	35	21	201	232	8.6
31	76	70	115			360		34		54	93	
Month	Maximum		Minimum		Mean		Per square mile		Run-off in inches			
October	242		16		29.5		0.170		0.20			
November	536		25		96.8		.556		.62			
December	1,180		28		200		1.15		1.33			
January	450		66		201		1.16		1.34			
February	2,700		83		329		1.89		2.04			
March	10,600		360		1,779		10.2		11.76			
April	2,250		109		456		2.62		2.92			
May	155		34		80.3		.461		.52			
June	317		21		58.3		.335		.37			
July	201		5.5		32.3		.186		.21			
August	340		7.3		43.4		.249		.29			
September	50		6.7		14.3		.082		.09			
The year	10,600		5.5		278		1.60		21.70			

SUSQUEHANNA RIVER BASIN

Tuscarora Creek near Port Royal, Pa.

Location.- Water-stage recorder, lat. 40°30'55", long. 77°25'10", at highway bridge 2 miles southwest of Port Royal, Juniata County. Zero of gage is 419.80 feet above mean sea level.

Drainage area.- 214 square miles.

Records available.- October 1918 to September 1921, October 1931 to September 1936 in reports of U. S. Geological Survey; August 1911 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 25 years, 263 second-feet.

Extremes.- Maximum discharge during year (estimated), 14,400 second-feet Mar. 18; maximum gage height, 21.60 feet, from floodmark affected by backwater from Juniata River, Mar. 19; minimum discharge, 4.8 second-feet Sept. 25 (gage height, 2.30 feet); minimum daily discharge, 8.8 second-feet Sept. 20.

1911-36: Maximum discharge, that of Mar. 18, 1936; maximum gage height, that of Mar. 19, 1936; minimum discharge, 1 second-foot Aug. 31, Sept. 4-6, 14, 18, 1913, Sept. 21, 1914.

Remarks.- Records fair except those for periods of ice effect and for period of backwater and missing gage record, which are poor. Discharge for periods of ice effect, Dec. 26 to Jan. 3, Jan. 21 to Mar. 5, determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for period of backwater and missing gage record, Mar. 18-30, determined from weekly gage readings and a comparison with records for stations mentioned above. Regulation at medium and low stages from operation of gristmills upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	33	156	114	120	170	1,800	366	162	59	69	47	50
2	26	118	108	125	165	1,500	407	150	49	59	22	40
3	37	91	95	160	160	1,100	467	218	43	103	28	32
4	25	80	73	450	165	1,000	348	227	42	185	29	34
5	31	71	71	436	165	1,400	315	168	39	108	30	32
6	18	64	89	337	160	1,450	1,930	150	41	81	44	18
7	36	58	61	330	160	1,060	1,570	140	28	55	30	23
8	23	60	84	309	155	860	1,040	132	55	44	28	20
9	23	66	107	315	155	960	800	123	63	41	21	15
10	25	60	129	600	150	1,330	1,220	114	55	37	27	13
11	21	59	264	690	150	4,030	1,000	114	48	34	35	16
12	36	150	376	594	145	9,160	830	112	49	26	38	12
13	16	2,940	355	422	150	3,450	710	116	56	32	33	10
14	31	690	1,290	333	190	1,740	582	144	72	34	30	12
15	25	384	1,180	273	240	1,330	526	123	70	29	26	19
16	24	267	900	297	260	1,210	462	103	46	27	18	19
17	23	282	630	282	270	3,420	398	92	38	25	37	18
18	21	432	474	264	250	12,000	359	93	108	23	34	15
19	23	352	380	298	220	8,300	324	96	697	17	33	13
20	15	306	318	156	200	4,450	300	108	199	20	28	8.8
21	30	252	203	230	190	2,850	279	87	114	20	30	13
22	22	210	159	220	190	2,280	255	76	81	20	29	15
23	24	178	192	210	185	1,280	235	70	63	20	20	12
24	24	152	198	200	185	890	218	65	69	27	25	12
25	24	130	176	195	180	788	200	69	73	39	28	12
26	23	129	160	190	500	522	190	61	66	41	29	13
27	15	119	140	185	1,500	608	185	66	54	50	23	29
28	31	129	135	180	2,200	635	176	69	45	248	22	11
29	294	166	125	180	2,100	503	170	62	61	98	63	12
30	570	138	125	175	452	166	56	65	58	110	20	20
31	239		120	175		409		49		70	81	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					570	15	58.3	0.272		0.31		
November					2,940	58	276	1.29		1.44		
December					1,290	61	285	1.33		1.53		
January					690	120	290	1.36		1.57		
February					2,200	145	376	1.76		1.90		
March					12,000	409	2,347	11.0		12.68		
April					1,930	166	534	2.50		2.79		
May					227	49	110	.514		.59		
June					697	28	84.9	.397		.44		
July					248	17	56.1	.262		.30		
August					110	18	34.9	.163		.19		
September					50	8.8	19.0	.089		.10		
The year					12,000	8.8	374	1.75		23.84		

Conodoguinet Creek near Hogestown, Pa.

Location.— Water-stage recorder, lat. 40°15'10", long. 77°1'15", 1,000 feet above highway bridge, three-eighths of a mile below mouth of Hogestown Run, and 1 mile northeast of Hogestown, Cumberland County. Zero of gage is 350.25 feet above mean sea level.

Drainage area.- 470 square miles.

Records available. - October 1931 to September 1936 in reports of U. S. Geological Survey; September 1929 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Extremes. Maximum discharge during year 11,100 second-feet Mar. 13 (gage height, 10.37 feet); minimum, 61 second-feet Oct. 26 (gage height, 0.88 foot); minimum daily discharge, 87 second-feet Oct. 19, 20.

11.32 feet; minimum, 24 second-feet Dec. 2, 1934 (gage height, 1930).

Remarks.— Records good except those for periods of ice effect and for periods of recorder failure, which are fair. Discharge for periods of ice effect, Dec. 7, 8, Dec. 24 to Jan. 9, Jan. 22 to Feb. 29, determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations in adjacent drainage areas. Discharge for periods of recorder failure, for stations 16–21, June 18–21, determined by comparison with records for stations mentioned above. Some regulation at low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	108	523	315	290	410	2,850	1,000	485	248	192	225	184		
2	114	374	294	320	390	2,180	970	469	251	204	184	156		
3	108	302	286	370	380	1,690	1,170	474	236	203	171	152		
4	106	247	251	600	400	2,080	938	495	244	308	158	135		
5	90	247	205	1,500	380	2,780	840	469	232	344	156	138		
6	106	198	220	1,100	360	2,900	3,640	433	225	240	152	122		
7	109	188	210	1,050	350	2,400	3,970	418	225	196	143	120		
8	110	175	210	1,000	340	1,940	4,120	398	225	182	150	128		
9	115	185	269	1,800	330	2,070	2,220	388	251	175	142	150		
10	95	185	344	1,760	320	2,770	2,400	374	240	163	144	114		
11	94	160	610	1,250	315	4,230	2,180	370	236	166	158	140		
12	100	157	854	990	310	7,960	1,900	360	258	158	207	118		
13	105	1,190	731	887	315	8,990	1,740	379	272	158	158	128		
14	92	2,820	1,760	822	370	4,260	1,420	393	259	161	142	128		
15	114	1,190	2,170	791	700	2,720	1,280	374	248	156	151	130		
16	104	791	1,730	1,020	1,200	2,190	1,150	346	229	144	254	122		
17	101	921	1,280	1,020	1,050	3,050	1,000	337	204	154	214	115		
18	98	1,490	990	887	900	5,610	920	324	400	151	182	118		
19	87	1,100	791	984	750	7,700	860	346	600	137	140	118		
20	87	822	675	579	650	6,100	800	365	400	136	146	104		
21	97	651	469	811	580	4,560	750	355	260	151	156	105		
22	108	542	318	730	540	3,730	714	310	220	166	154	122		
23	93	453	404	680	500	2,530	678	297	200	168	150	94		
24	101	392	360	630	480	2,070	632	293	262	154	152	115		
25	112	336	340	580	470	1,860	600	272	229	162	148	108		
26	96	315	330	550	900	1,540	583	280	221	155	136	105		
27	100	306	310	520	2,500	1,500	566	284	201	179	127	105		
28	102	311	300	500	2,800	1,660	550	276	203	560	162	103		
29	146	402	295	480	3,000	1,310	528	265	187	328	213	102		
30	1,620	384	295	450		1,170	522	255	204	425	300	125		
31	990		290	430		1,100		248		318	272			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October					1,620		87		181		0.385		0.44	
November					2,820		157		579		1.23		1.37	
December					2,170		205		578		1.23		1.42	
January					1,800		290		819		1.74		2.01	
February					3,000		310		758		1.61		1.74	
March					8,990		1,100		3,210		6.83		7.87	
April					4,970		522		1,355		2.88		3.21	
May					495		248		359		.764		.88	
June					600		187		256		.545		.61	
July					560		136		210		.447		.52	
August					300		127		172		.366		.42	
September					184		94		123		.262		.29	
The year					8,990		87		718		1.53		20.78	

Swatara Creek at Harper Tavern, Pa.

Location.— Water-stage recorder, lat. 40°24'10", long. 76°34'35", at highway bridge at Harper Tavern, Lebanon County, 6 miles northwest of Annville, and 8½ miles below mouth of Little Swatara Creek. Zero of gage is 355.53 feet above mean sea level.

Drainage area.- 333 square miles.

Records available.--October 1919 to September 1921, October 1931 to September 1936 in reports of U. S. Geological Survey; December 1918 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 17 years, 530 second-feet.

Extremes.— Maximum discharge during year, 15,800 second-feet Mar. 12 (gage height, 13.75 feet); minimum, 31 second-feet Oct. 28.

1918-36: Maximum discharge, 25,300 second-feet Aug. 24, 1933 (gage height, 17.53 feet); minimum, 8 second-feet Sept. 24, 25, 1932 (gage height, 0.03 foot).

Remarks. - Records excellent except those for periods of ice effect, Dec. 6-8, Dec. 22 to Jan. 4, Jan. 21 to Mar. 4, which are poor and were determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Some regulation at low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	45	85	702	230	380	900	990	292	96	152	46	94		
2	45	66	570	300	380	800	1,020	271	89	135	44	76		
3	49	54	456	600	380	800	990	266	87	304	42	98		
4	47	47	383	1,300	390	1,100	73	784	129	205	44	83		
5	43	45	284	1,170	400	1,870	690	250	98	152	42	62		
6	43	43	285	1,050	390	1,680	5,570	227	80	141	42	55		
7	41	41	220	741	380	1,420	4,540	213	74	106	46	51		
8	41	43	250	631	370	1,340	2,420	199	76	89	47	55		
9	43	43	384	1,090	370	1,750	1,870	186	80	80	42	58		
10	45	41	393	1,950	370	2,790	2,010	177	74	72	60	46		
11	43	41	618	1,170	360	5,420	1,800	174	70	91	131	42		
12	45	43	540	930	360	13,300	1,560	170	68	70	74	40		
13	43	93	435	834	370	8,300	1,450	170	124	64	51	42		
14	43	331	758	840	390	3,570	1,230	209	484	62	44	44		
15	47	171	741	947	450	2,660	1,080	186	240	60	46	104		
16	45	115	930	1,690	550	2,300	990	158	149	55	119	82		
17	45	316	702	1,140	480	2,960	840	149	106	51	119	58		
18	45	1,520	614	930	440	6,570	763	144	134	49	58	51		
19	49	798	548	858	410	5,860	692	180	1,090	47	46	40		
20	56	614	472	562	390	3,200	631	232	409	44	42	39		
21	43	620	332	600	370	3,870	576	167	243	46	39	40		
22	43	521	285	520	360	3,380	587	138	177	47	246	42		
23	47	430	265	450	350	2,470	488	124	138	51	95	42		
24	45	328	250	420	360	2,040	440	121	152	68	200	40		
25	45	275	240	410	400	1,710	408	113	183	87	82	42		
26	47	246	230	400	500	1,380	388	106	141	67	56	39		
27	38	223	225	400	650	2,060	367	119	113	60	86	37		
28	34	456	220	390	900	2,060	343	152	119	140	89	37		
29	41	1,910	220	390	1,000	1,480	314	119	126	81	259	39		
30	165	956	220	390		1,290	314	106	129	70	626	47		
31	180		220	380		1,140		101		51	148			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October.....					180		34		52.6		0.158		0.18	
November.....					1,910		41		350		1.05		1.17	
December.....					930		220		419		1.26		1.45	
January.....					1,950		230		765		2.30		2.65	
February.....					1,000		350		445		1.34		1.44	
March.....					13,300		800		2,971		8.92		10.28	
April.....					5,570		314		1,204		3.62		4.04	
May.....					292		101		178		.535		.62	
June.....					1,090		68		176		.529		.59	
July.....					304		44		90.2		.271		.31	
August.....					626		39		100		.300		.35	
September.....					104		37		54.2		.163		.18	
The year.....					13,300		34		569		1.71		23.26	

West Conewago Creek near Manchester, Pa.

Location.— Water-stage recorder, lat. $40^{\circ}4'55''$, long. $76^{\circ}43'10''$, 500 feet above Manchester-York Haven highway bridge and $1\frac{1}{4}$ miles north of Manchester, York County. Zero of gage is 263.04 feet above mean sea level.

Drainage area.- 510 square miles.

Records available.- October 1928 to September 1936.

Extremes.- Maximum discharge during year, 13,700 second-feet Mar. 12; maximum gage height, 17.08 feet Mar. 12 (backwater); minimum discharge, 8.0 second-feet Oct. 6, 9, 17 (gage height, 1.32 feet); minimum daily discharge, 14 second-feet Oct. 6, 17.

1928-36: Maximum discharge, 47,600 second-feet Aug. 24, 1933 (gage height, 24.14 feet); minimum, 2 second-feet Aug. 7, 8, Oct. 20, 1930.

Remarks. - Records fair except those for the following periods, which are poor. Discharge for periods of missing gage record, Oct. 27-29, July 15 to Aug. 5, Aug. 10, 11, 24-29, Sept. 14-16, and for period of backwater from Susquehanna River, Mar. 18-21, determined by comparison with records for stations in adjacent drainage areas. Discharge for periods of ice effect, Dec. 22 to Jan. 3, Jan. 21 to Feb. 28, determined from gage heights, weather records, and by comparison with records for stations mentioned above. Slight regulation at low stages from operation of gristmills upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	20	173	356	153	195	4,830	735	300	85	125	90	192		
2	22	108	268	165	190	3,070	730	287	78	115	75	152		
3	14	82	226	1,200	185	2,030	982	268	105	726	65	118		
4	24	69	186	3,110	178	3,360	762	291	116	547	60	96		
5	21	63	137	1,540	174	4,880	620	365	104	521	58	84		
6	14	61	122	1,290	168	3,680	8,250	283	92	280	55	73		
7	23	58	117	721	165	2,350	5,590	248	98	170	50	64		
8	20	54	120	605	162	1,670	1,670	230	94	120	54	54		
9	18	53	190	1,100	160	2,110	1,290	223	78	84	48	53		
10	22	48	352	3,610	160	3,140	2,280	202	106	68	100	58		
11	28	57	755	1,510	162	4,940	1,830	189	110	289	450	61		
12	29	54	1,050	990	163	12,300	1,610	192	96	631	205	63		
13	26	67	540	903	165	8,990	1,440	189	5,390	260	107	54		
14	28	447	2,160	1,260	170	4,300	1,080	205	1,110	158	68	49		
15	21	240	1,340	1,060	200	2,150	930	192	319	105	307	45		
16	19	142	1,170	1,760	350	1,530	845	170	179	70	469	50		
17	14	178	789	1,350	800	1,760	735	155	120	45	212	47		
18	30	1,260	605	930	750	4,300	653	146	112	33	186	44		
19	39	829	521	1,190	600	4,180	605	173	1,530	27	110	35		
20	25	435	455	674	450	5,720	563	216	752	28	82	29		
21	26	325	371	750	350	8,880	521	202	244	32	60	36		
22	27	237	200	620	280	4,530	485	161	138	990	59	27		
23	19	189	165	510	250	1,950	446	138	96	800	57	29		
24	23	173	150	425	235	1,450	402	127	88	650	52	29		
25	22	138	142	360	265	1,280	374	110	73	550	50	25		
26	22	127	138	320	700	1,080	352	110	66	450	350	25		
27	25	117	136	280	3,000	1,410	342	110	73	550	500	21		
28	40	169	135	255	4,300	2,140	334	112	73	1,200	400	37		
29	200	1,300	137	235	3,920	1,160	321	105	78	600	450	31		
30	668	655	140	215		930	312	98	92	250	648	30		
31	465		143	205		818		100		120	275			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October.....					668		14		64.3		0.126		0.15	
November.....					1,300		48		264		.518		.58	
December.....					2,160		117		430		.843		.97	
January.....					3,610		153		945		1.85		2.13	
February.....					4,300		160		650		1.27		1.37	
March.....					12,300		818		3,450		6.76		7.79	
April.....					8,250		312		1,170		2.29		2.56	
May.....					365		98		190		.373		.43	
June.....					5,390		66		383		.751		.84	
July.....					1,200		27		341		.669		.77	
August.....					648		48		186		.565		.62	
September.....					192		21		56.9		.112		.13	
The year.....					12,300		14		680		1.33		18.14	

Codorus Creek at Spring Grove, Pa.

Location.- Water-stage recorder, lat. $39^{\circ}52'10''$, long. $76^{\circ}51'55''$, at highway bridge at Spring Grove, York County. Zero of gage is 436.22 feet above mean sea level.

Drainage area.- 74.3 square miles.

Records available. - March 1932 to September 1936 in reports of U. S. Geological Survey; April 1929 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Extremes.— Maximum discharge during year, 1,380 second-feet Feb. 27 (gage height 6.11 feet); minimum, 0.8 second-foot Sept. 20 (gage height, 0.23 foot); minimum daily discharge, 2.0 second-feet Sept. 20.

1929-36: Maximum discharge, 11,200 second-foot Aug. 23, 1933 (gage height, 11.84 feet) from rating curve extended on basis of computed discharge over dam upstream; minimum recorded, that of Sept. 20, 1936; minimum daily discharge, that of Sept. 20, 1936.

Remarks.- Records fair. Discharge for period of ice effect, Dec. 22 to Jan. 2, determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for days of missing gage record, Jan. 26, Feb. 4, 5, 11, 13, determined by comparison with records for stations mentioned above. Regulation at low stages from operation of paper mill above station.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.3	8.4	41	27	47	578	143	72	30	19	18	9.6
2	10	7.0	34	29	47	276	180	69	27	18	18	9.6
3	9.3	7.4	30	554	45	366	196	79	29	42	18	11
4	9.9	7.8	27	239	45	502	136	82	39	27	16	10
5	9.0	7.4	24	196	42	368	133	68	29	36	14	8.6
6	8.4	7.0	25	117	41	259	754	62	28	18	16	8
7	11	7.4	23	92	45	200	359	60	28	14	24	10
8	9.0	9.3	30	81	41	185	262	58	34	13	15	9.3
9	9.3	7.4	42	413	44	206	251	55	33	10	14	12
10	9.6	8.2	33	274	45	220	278	54	30	10	16	9.6
11	9.9	8.2	63	154	41	500	281	55	29	12	33	9.6
12	9.6	9.6	56	125	41	827	227	52	29	18	16	8
13	9.0	32	50	162	41	519	214	52	178	11	15	7.6
14	9.3	20	109	127	43	340	176	49	36	11	14	12
15	8.8	11	76	168	52	271	168	46	31	9.6	11	11
16	8.2	8.2	72	207	79	231	160	45	29	8.6	104	12
17	8.6	91	57	122	76	262	142	45	26	8.2	20	11
18	9.6	86	50	150	118	564	134	42	48	7.8	13	12
19	8.8	45	45	142	81	472	126	50	63	9.0	12	10
20	5.8	29	42	132	63	389	118	44	30	22	13	2.6
21	8.8	22	28	111	59	838	113	40	24	21	11	7.6
22	8.6	18	26	104	57	533	105	39	22	91	11	11
23	9.0	18	25	74	47	375	100	37	21	18	9.6	12
24	9.3	14	24	77	49	309	93	36	33	101	10	12
25	9.0	14	24	74	96	262	90	36	27	28	9.9	12
26	7.8	14	24	74	530	221	87	32	22	20	16	12
27	6.8	14	23	62	767	286	84	38	20	120	18	3.6
28	9.0	72	23	55	703	272	85	35	23	40	12	8.6
29	10	106	23	56	665	190	80	33	21	25	14	12
30	31	47	24	54	171	177	77	33	19	23	12	14
31	9.6		25	53		157		32		21	10	

Month				Maximum	Minimum	Mean	Per square mile	Run-off in inches
October.....				31	5.8	9.72	0.131	0.15
November.....				106	7.0	25.2	.339	.38
December.....				109	23	38.6	.520	.60
January.....				554	27	139	1.87	2.16
February.....				767	41	140	1.88	2.03
March.....				838	157	360	4.85	5.59
April.....				754	77	178	2.40	2.68
May.....				82	32	49.4	.665	.77
June.....				178	19	34.6	.466	.52
July.....				120	7.8	26.8	.561	.42
August.....				104	9.6	17.9	.241	.28
September.....				14	2.0	9.96	.134	.15
The year.....				838	2.0	85.7	1.15	15.73

SUSQUEHANNA RIVER BASIN

South Branch of Codorus Creek near York, Pa.

Location.- Water-stage recorder, lat. 39°55'10", long. 76°45'0", just below dam of pumping station of York Water Co., half a mile above confluence with Codorus Creek, and 3 miles southwest of York, York County. Zero of gage is 373.03 feet above mean sea level.

Drainage area.- 117 square miles.

Records available.- October 1931 to September 1936 in reports of U. S. Geological Survey; May 1925 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Extremes.- Maximum discharge during year, 1,880 second-feet Feb. 28; maximum gage height, 6.85 feet Feb. 27 (affected by ice); minimum discharge, 0.9 second-foot Sept. 15, 17 (gage height, 0.14 foot); minimum daily discharge, 5.5 second-feet Sept. 24.

1925-36: Maximum discharge, 19,300 second-feet Aug. 23, 1933 (gage height, 17.97 feet, from floodmark in gage house) from rating curve extended on basis of contracted-opening determination; minimum, 0.8 second-foot Aug. 28, 1935; minimum daily discharge, that of Sept. 24, 1936.

Remarks.- Records good except those for periods of ice effect and period of no gage record, which are poor. Discharge for periods of ice effect, Dec. 22 to Jan. 3, Jan. 24 to Feb. 27, determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations in adjacent drainage areas. Discharge for period of no gage record, July 9-13, determined by comparison with records for stations mentioned above. Regulation from pumping plant upstream. Municipal water supply for York diverted above station not included in records except in part of monthly table. Record of monthly diversion furnished by York Water Co.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	42	76	58	80	826	238	119	53	44	26	14
2	19	31	69	66	78	414	269	119	44	40	24	12
3	14	39	60	900	76	481	301	132	44	94	26	17
4	9.6	34	56	410	73	922	223	173	64	67	21	17
5	11	31	48	281	72	478	216	123	53	74	16	13
6	19	30	55	192	71	356	741	120	54	51	18	15
7	19	30	45	156	70	282	472	106	45	39	32	17
8	13	45	58	135	70	253	383	102	53	32	37	11
9	68	34	79	588	70	264	363	96	52	28	34	10
10	21	33	61	450	71	283	394	96	46	26	19	8.8
11	30	119	107	255	72	663	379	131	47	40	56	9.6
12	33	76	108	209	75	995	339	55	47	80	33	12
13	19	123	91	218	80	681	328	53	202	60	24	12
14	17	68	130	205	90	489	289	69	72	41	16	11
15	13	39	117	221	105	408	268	80	56	15	17	5.7
16	18	41	121	376	120	352	260	83	47	13	128	6.6
17	12	259	100	196	140	370	234	81	45	17	35	6.0
18	10	299	90	212	160	677	222	84	53	21	18	6.2
19	14	180	87	267	90	650	209	100	88	17	15	7.6
20	11	100	81	197	88	580	195	78	47	49	17	9.3
21	19	48	58	166	86	920	185	71	43	26	15	11
22	17	42	56	161	86	709	175	68	39	104	15	8.6
23	19	39	53	128	88	546	164	66	37	47	16	7.0
24	24	33	51	115	98	479	156	66	60	130	14	5.5
25	18	37	49	110	120	423	149	62	54	50	9.6	6.2
26	17	45	48	103	600	370	149	56	43	21	25	9.8
27	18	48	48	98	1,000	416	141	69	39	101	26	19
28	21	80	49	94	949	399	141	62	45	66	19	9.7
29	30	80	51	89	792	316	144	58	38	37	30	7.3
30	117	88	52	86	283	129	58	41	31	28	28	13
31	49	54	83	83	258	59	25	17	25	17	17	13
Month	Observed			Diversions				Corrected for diversion				
	Maximum	Minimum	Mean	(Mean)	Mean	Per square mile	Run-off in inches					
October	117	9.6	23.6	12.8	36.4	0.311	0.36					
November	299	30	73.1	12.6	85.7	.732	.82					
December	130	45	71.2	13.0	84.2	.720	.83					
January	900	58	220	13.5	234	2.00	2.31					
February	1,000	70	192	14.2	206	1.76	1.90					
March	995	253	501	12.3	513	4.38	5.05					
April	741	129	262	12.4	274	2.34	2.61					
May	173	53	86.9	13.6	100	.855	.99					
June	202	37	55.0	13.9	68.9	.589	.66					
July	130	13	47.9	14.5	62.4	.533	.61					
August	128	9.6	26.7	14.7	41.4	.354	.41					
September	17	5.5	10.6	14.9	25.5	.218	.24					
The year	1,000	5.5	131	13.5	144	1.23	16.79					

SUSQUEHANNA RIVER BASIN

Conestoga Creek at Lancaster, Pa.

Location.- Water-stage recorder, lat. 40°8'0", long. 76°16'40", at Pennsylvania Railroad bridge 500 feet below diversion dam of city waterworks and three-quarters of a mile east of Lancaster, Lancaster County. Zero of gage is 244.74 feet above mean sea level.

Drainage area.- 322 square miles.

Records available.- September 1928 to September 1936.

Extremes.- Maximum discharge during year, 6,890 second-feet Mar. 12 (gage height, 9.58 feet); probably no flow at times when pool was drawn down and gates in dam were closed; minimum daily discharge, 20 second-feet Oct. 19.

1928-36: Maximum discharge, 22,800 second-feet Aug. 24, 1933 (gage height, 17.52 feet, from flood mark in recorder shelter) from rating curve extended above 3,500 second-feet by slope-area method; probably no flow at times; minimum daily discharge observed, 9 second-feet Oct. 14, 1931, Sept. 15, 23, 1932.

Remarks.- Records fair. Discharge for period of ice effect, Dec. 22 to Jan. 2, determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for period of missing gage record, Jan. 31 to Feb. 5 determined by comparison with records for stations mentioned above. Regulation from operation of waterworks. Water supply for city of Lancaster diverted above gage not included in records except in part of monthly table. Record of diversion furnished by city of Lancaster.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	62	143	379	205	350	1,580	908	419	179	187	68	117
2	66	86	359	215	340	1,180	940	407	158	172	59	99
3	94	47	285	3,010	330	1,100	1,070	403	150	450	34	98
4	68	68	258	2,350	320	1,540	815	402	157	259	78	94
5	64	60	215	1,280	310	1,580	738	415	157	187	76	86
6	55	38	217	845	296	1,260	2,760	371	135	182	86	71
7	57	42	197	650	280	1,000	1,800	353	129	157	94	73
8	71	63	207	585	254	880	1,250	338	137	148	82	73
9	69	37	390	1,130	260	971	1,100	324	142	140	63	101
10	61	23	365	2,060	254	1,240	1,420	310	130	138	77	112
11	64	47	356	1,000	240	1,940	1,250	310	133	129	88	73
12	69	70	420	815	240	5,420	1,140	303	256	111	81	80
13	52	279	311	785	233	3,010	1,070	306	1,170	146	71	69
14	68	467	451	785	245	1,830	908	395	548	142	71	68
15	76	168	470	728	331	1,480	845	306	277	130	65	77
16	68	112	783	1,290	423	1,260	815	267	198	122	209	81
17	70	954	504	815	399	1,590	755	264	214	114	154	76
18	64	2,700	424	711	407	3,460	706	270	230	109	105	69
19	20	816	420	815	349	3,040	684	286	454	86	84	68
20	36	564	484	605	331	2,310	656	300	263	121	73	49
21	68	445	331	620	293	2,620	625	244	194	123	69	58
22	51	336	290	595	264	2,210	615	229	181	112	77	70
23	53	276	260	457	233	1,560	570	219	160	101	114	70
24	62	230	230	560	243	1,410	532	202	182	127	88	66
25	59	227	215	491	254	1,270	509	207	224	125	95	61
26	59	201	205	443	594	1,180	500	194	177	98	833	59
27	31	192	195	403	1,400	1,670	491	192	153	118	211	50
28	51	213	190	393	1,560	1,340	464	210	265	116	168	60
29	56	1,450	195	391	1,330	1,210	460	182	235	125	319	58
30	86	565	195	368	1,070	1,070	443	172	187	118	219	72
31	181	200	360	360	1,000	1,000	168	168	87	151	151	
Month	Observed			Diversions				Corrected for diversion				
	Maximum	Minimum	Mean	Mean	Mean	Per square mile	Run-off in inches					
October	181	20	64.9	10.3	75.2	0.234	0.27					
November	2,700	23	364	10.1	374	1.16	1.29					
December	783	190	323	9.3	333	1.03	1.19					
January	3,010	205	831	9.3	840	2.61	3.01					
February	1,560	233	426	10.2	436	1.35	1.46					
March	5,420	880	1,765	10.2	1,775	5.51	6.35					
April	2,760	443	895	9.9	905	2.81	3.14					
May	482	168	292	10.6	303	.941	1.08					
June	1,170	129	239	10.2	249	.773	.86					
July	450	86	145	10.4	155	.481	.55					
August	833	59	133	10.6	144	.447	.52					
September	117	49	75.3	10.4	85.7	.266	.30					
The year	5,420	20	464	10.2	474	1.47	20.06					

SUSQUEHANNA RIVER BASIN

Muddy Creek at Castle Fin, Pa.

Location.- Water-stage recorder, lat. 39°46'25", long. 76°19'0", 1 mile below Castle Fin, York County, and 2 3/4 miles above mouth of creek. Zero of gage is 175.42 feet above mean sea level.

Drainage area.-133 square miles.

Records available.-October 1928 to September 1936.

Extremes.-Maximum discharge during year, 3,700 second-feet Jan. 9; maximum gage height, 7.88 feet Jan. 3 (affected by ice); minimum discharge, 13 second-feet Sept. 19; minimum daily discharge, 35 second-feet Sept. 24.

1928-36: Maximum discharge, 16,600 second-feet Aug. 23, 1933 (gage height, 21.11 feet, from floodmark in gage shelter) from rating curve extended above 4,000 second-feet on basis of computed discharge over power dam upstream; minimum gage height, 0.90 foot Nov. 29, 1930 (discharge not determined); minimum daily discharge observed, 20 second-feet July 29, 1931.

Remarks.- Records fair. Discharge for periods of ice effect, Dec. 22 to Jan. 6, Jan. 23 to Feb. 26, determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations in adjacent drainage areas. Regulation from operation of hydroelectric plant upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	80	102	145	105	140	722	294	197	136	112	79	62
2	89	85	141	120	135	382	308	191	123	109	60	49
3	80	86	127	1,950	130	730	315	289	124	116	70	54
4	74	82	116	530	130	664	271	346	150	122	60	67
5	72	80	102	300	130	471	259	218	142	115	74	50
6	74	84	127	260	130	353	874	200	121	114	62	50
7	85	81	106	236	125	291	462	194	122	90	67	54
8	75	97	119	215	130	261	374	191	119	85	68	54
9	82	94	135	1,220	130	288	355	178	130	84	66	54
10	73	79	125	548	135	317	394	177	129	79	61	46
11	69	90	165	341	140	1,270	408	174	129	126	71	48
12	102	83	167	286	140	1,180	361	173	159	95	32	48
13	85	171	148	288	145	710	353	224	185	90	64	46
14	72	149	183	275	155	499	322	273	138	81	61	46
15	78	105	174	303	220	410	312	176	156	86	46	48
16	82	88	194	489	245	360	309	167	128	68	94	47
17	82	717	170	270	240	434	287	160	102	67	80	43
18	88	361	158	281	250	748	276	158	111	68	65	48
19	88	229	152	343	180	623	265	182	131	67	64	46
20	80	174	146	323	160	547	257	164	125	82	61	43
21	70	160	114	304	150	734	248	152	118	77	54	47
22	88	135	105	227	140	554	242	152	98	78	54	58
23	88	127	100	185	140	463	233	148	102	68	60	44
24	102	118	97	180	135	420	227	148	140	148	55	35
25	82	107	96	175	135	386	218	141	138	107	55	59
26	91	111	95	170	1,700	350	218	140	114	71	62	44
27	83	104	94	165	1,300	444	207	149	118	86	62	41
28	87	131	94	160	990	430	209	152	100	104	62	40
29	86	289	95	155	1,060	350	209	140	112	80	80	39
30	181	155	97	150	330	330	203	135	109	80	79	44
31	106	99	145	145	313	313	131	131	67	67	64	
Month												
	Maximum			Minimum			Mean			Per square mile	Run-off in inches	
October	181			69			86.2			0.648	0.75	
November	717			79			149			1.12	1.25	
December	194			94			129			.970	1.12	
January	1,950			105			345			2.59	2.99	
February	1,700			125			308			2.32	2.50	
March	1,270			261			517			3.89	4.48	
April	874			203			309			2.32	2.59	
May	346			131			181			1.36	1.57	
June	185			98			127			.955	1.07	
July	148			67			91.0			.684	.79	
August	94			46			65.9			.495	.57	
September	67			35			48.5			.365	.41	
The year	1,950			35			196			1.47	20.09	

POTOMAC RIVER BASIN

Evitts Creek near Bedford Valley, Pa.

Location. - Water-stage recorder, lat. $39^{\circ}47'23''$, long. $78^{\circ}38'48''$, 2 miles upstream from Thomas W. Koon Dam, half a mile upstream from backwater from dam, and 3 miles south of Bedford Valley post office, Bedford County.

Extremes.— Maximum discharge during year, about 5,240 second-feet Mar. 17 (gage height, 7.13 feet); minimum, 1.9 second-feet July 17 (gage height, 1.03 feet).

Maximum stage known, about 8 feet, from flood mark, date unknown (discharge not determined).

Remarks.—Records good except those above 500 second-feet, which are fair, and those affected by ice, Dec. 23 to Jan. 2, Jan. 20 to Feb. 27, or missing stage record, Sept. 14–18, which are poor and are based on weather data and hydrographic comparisons with records of nearby streams.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.6	5.3	7.8	12	11	218	59	20	8.8	7.5	3.8	3.4
2	5.0	5.0	8.1	13	10	156	58	20	7.8	6.3	3.6	3.4
3	4.6	4.8	6.9	56	10	127	52	35	7.5	5.6	3.6	4.0
4	4.2	4.6	6.1	44	10	156	46	31	7.2	4.8	3.4	3.6
5	4.2	4.6	6.3	31	10	297	48	25	6.6	4.6	4.4	3.1
6	6.6	4.4	6.9	23	9	250	346	22	6.3	4.4	5.6	2.7
7	5.3	4.8	6.9	22	9	178	182	20	6.6	4.0	6.6	2.6
8	5.0	6.1	7.5	24	8	150	121	18	12	3.8	4.4	2.6
9	4.4	5.3	9.2	43	8	167	116	18	9.2	3.8	3.6	2.4
10	4.4	4.8	8.8	71	7	227	119	16	7.8	3.4	3.2	2.4
11	4.6	4.6	12	45	7	529	98	18	12	2.9	3.2	2.3
12	6.6	6.1	8.8	37	6	586	91	18	16	2.7	3.2	2.3
13	5.6	95	15	40	6	303	74	18	21	2.9	3.1	2.3
14	4.8	23	64	40	8	182	64	18	14	2.9	3.1	3.0
15	4.4	14	53	35	40	137	59	16	10	2.6	3.4	2.7
16	4.2	13	59	39	35	119	53	14	9.8	2.4	3.1	2.6
17	4.0	16	38	33	30	1,990	49	14	8.8	2.3	2.7	2.6
18	4.0	14	30	34	25	1,080	45	14	8.8	2.4	2.6	2.6
19	4.0	12	27	32	23	442	41	15	8.5	2.4	4.2	2.6
20	4.4	12	22	37	21	255	39	13	7.8	2.2	4.2	2.6
21	4.0	10	18	33	20	309	37	12	6.9	2.2	5.2	2.6
22	5.0	10	19	30	19	167	35	12	6.1	2.2	10	2.6
23	4.6	9.5	20	22	18	124	31	11	6.3	2.4	4.4	2.4
24	4.4	8.5	17	24	17	153	29	10	7.2	8.5	3.4	2.7
25	4.2	8.5	15	23	53	154	27	11	7.2	5.3	3.1	2.9
26	4.2	8.5	13	20	540	106	26	10	6.1	3.4	4.6	2.6
27	4.2	8.5	13	17	480	134	25	10	5.3	37	3.8	2.4
28	4.2	9.2	14	13	327	101	25	10	5.0	31	3.2	2.2
29	11	9.5	12	14	210	85	24	9.8	4.8	8.5	6.9	2.2
30	9.5	8.8	12	13		76	22	9.5	5.3	5.8	6.1	3.4
31	6.1		12	12		69		9.2		4.6	4.0	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					11	4.0	5.04	0.167		0.19		
November					95	4.4	11.7	.387		.43		
December					64	6.1	18.3	.606		.70		
January					71	12	30.1	.997		1.15		
February					540	6	68.2	2.26		2.44		
March					1,990	69	291	9.64		11.11		
April					346	22	68.0	2.25		2.61		
May					35	9.2	16.0	.530		.61		
June					21	4.8	8.56	.283		.32		
July					37	2.2	5.96	.197		.23		
August					10	2.6	4.18	.138		.16		
September					4.0	2.2	2.73	.090		.10		
The year					1,990	2.2	44.2	1.46		19.95		

Location.— Chain gage, lat. 39°43'20", long. 78°43'35", at highway bridge 200 feet north of Pennsylvania-Maryland State line, 3 miles southwest of Sylvan, Franklin County, and 10 miles above mouth. Zero of gage is 434.16 feet above mean sea level.

Drainage area.- 158 square miles.

Records available.- June 1930 to September 1936.

Extremes.— Maximum discharge during year, 20,700 second-feet Mar. 18 (gage height, 17.4 feet, from floodmark) from rating curve extended on basis of contracted-opening determination; minimum, 5.1 second-feet Sept. 19-21, 23, 26-29 (gage height, 0.82 foot).

1930-36: Maximum discharge, that of Mar. 18, 1936; minimum, 3.0 second-foot Aug. 8, 1930 (gage height, 0.64 foot).

Remarks. - Records good except those for period of missing gage record, Oct. 1-6, which are fair and were determined by comparison with records for stations in adjacent drainage areas; and those for periods of ice effect, Dec. 3-6, Dec. 22 to Jan. 9, Jan. 21 to Feb. 26, which are poor and were determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations mentioned above. Discharge for high stages determined from graphs based on twice-daily gage readings.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	49	40	52	88	1,280	273	92	31	19	17	19
2	15	40	34	56	86	875	297	82	30	20	14	13
3	17	32	30	65	84	675	297	84	27	21	11	11
4	18	30	25	110	82	755	239	218	27	22	12	11
5	17	29	23	250	80	1,420	212	96	25	18	10	9.
6	16	26	23	200	80	1,290	2,130	83	23	16	9.8	7.
7	16	25	24	190	80	1,490	73	21	14	13	7.	7.
8	16	26	33	180	80	715	1,100	70	31	13	11	7.
9	16	29	37	240	82	721	795	68	27	12	11	8.
10	14	28	43	675	84	1,070	835	65	30	11	11	8.
11	14	24	45	430	87	1,740	715	63	28	10	9.8	7.
12	17	24	58	277	94	3,590	637	65	61	11	9.0	7.
13	19	203	62	179	98	2,060	529	71	45	9.0	9.0	7.
14	18	373	429	289	115	1,130	432	70	46	8.6	8.6	7.
15	19	179	529	254	160	823	375	65	38	9.0	8.1	7.
16	16	117	462	314	250	715	322	56	31	8.1	8.6	6.
17	14	109	341	265	210	5,520	262	52	24	8.1	7.4	6.
18	12	117	242	220	180	9,570	239	53	22	7.4	7.4	5.
19	13	109	179	277	165	2,740	207	58	21	7.4	7.7	5.
20	13	88	142	170	155	1,590	178	63	39	8.1	8.6	5.
21	13	81	97	150	150	1,770	168	55	27	7.4	9.0	5.
22	13	73	82	140	145	1,200	150	44	20	7.4	11	6.
23	15	64	73	135	145	814	150	41	19	7.4	9.8	6.
24	17	54	65	130	145	649	133	39	21	17	9.0	6.
25	15	45	58	120	155	575	117	39	21	15	15	6.
26	14	47	54	115	300	460	114	38	20	10	13	5.
27	16	42	52	110	1,120	479	110	38	19	37	87	5.
28	16	43	49	105	2,130	487	105	37	18	63	36	5.
29	40	43	48	100	1,260	395	101	37	17	43	31	5.
30	249	45	49	95		360	94	37	17	30	19	6.
31	240		50	90		518		33		20	23	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October.....					249	12	31.0	0.196		0.23		
November.....					373	24	73.2	.463		.52		
December.....					529	23	112	.709		.82		
January.....					675	52	193	1.22*		1.41		
February.....					2,130	80	272	1.72		1.86		
March.....					9,570	318	1,508	9.54		11.00		
April.....					2,130	94	427	2.70		3.01		
May.....					218	33	64.0	.405		.47		
June.....					61	17	27.5	.174		.19		
July.....					63	7.4	16.4	.104		.12		
August.....					87	7.4	16.1	.096		.11		
September.....					19	5.1	7.53	.048		.05		
The year.....					9,570	5.1	230	1.46		19.79		

Allegheny River at Larabee, Pa.

Location.— Wire-weight gage, lat. 41°54'5", long. 78°23'5", at bridge on U. S. Highway 6 at Larabee, McKean County, 1 mile below mouth of Potato Creek and 3½ miles south of Eldred. Zero of gage is 1,423.39 feet above mean sea level.

Drainage area.— 541 square miles.

Records available.— October 1920 to September 1921, October 1931 to September 1936 in reports of U. S. Geological Survey; June 1915 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.— 12 years (1920-21, 1925-36), 791 second-feet.

Extremes.— Maximum discharge during year, 6,720 second-feet Mar. 18 (gage height, 15.46 feet) from rating curve extended above 4,500 second-feet; minimum, 18 second-feet July 20 (gage height, 0.32 foot).

1915-36: Maximum discharge, 8,210 second-feet (revised) Nov. 18, 1927 (gage height, 17.6 feet, from graph based on gage readings) from rating curve extended above 4,500 second-feet; minimum, about 0.1 second-foot July 25, 1934 (gage height, 0.22 foot); minimum daily discharge, 3.5 second-feet Aug. 8, 1934.

Remarks.— Records fair except those for periods of ice effect, Dec. 3-9, Dec. 22 to Feb. 27, which are poor and were determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations downstream. Discharge for periods of missing gage record, Dec. 16, 17, July 3-6, determined by comparison with records for stations mentioned above. Discharge for high stages determined from graphs based on twice-daily gage readings. Some regulation at low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	158	327	1,080	400	210	3,000	4,240	711	188	373	33	52
2	421	294	627	420	200	2,320	3,850	683	168	305	32	47
3	294	272	480	460	200	2,100	3,630	800	158	230	30	42
4	219	261	430	650	220	3,000	3,050	711	148	168	33	37
5	219	240	410	600	210	3,850	2,500	711	128	119	40	37
6	198	305	400	560	200	3,630	2,550	683	119	87	214	35
7	188	327	430	540	190	2,950	3,410	627	258	65	411	34
8	168	397	550	530	180	2,630	3,300	600	373	47	115	35
9	148	397	1,100	530	180	2,950	2,850	547	283	44	59	34
10	158	373	1,450	560	170	3,080	2,550	421	240	32	47	30
11	158	397	1,390	540	160	3,750	2,360	470	483	37	280	27
12	119	470	1,280	550	160	4,980	2,280	470	350	67	255	26
13	119	1,090	1,360	570	160	5,320	2,050	470	261	68	104	26
14	115	1,430	1,430	700	180	4,810	1,790	470	219	50	93	28
15	111	1,360	1,320	600	170	4,240	1,750	373	178	37	96	25
16	106	1,180	1,400	530	160	4,170	1,630	373	158	34	67	37
17	95	1,110	1,500	490	160	4,670	1,390	350	148	32	56	56
18	95	890	1,430	470	150	6,230	1,180	294	208	28	59	50
19	115	800	1,220	420	150	6,100	1,110	421	219	27	47	40
20	96	770	980	380	140	5,620	980	470	198	22	58	37
21	93	740	770	350	140	4,830	980	327	178	22	65	32
22	193	683	630	320	140	4,480	1,110	283	148	23	62	35
23	240	470	550	300	140	4,210	950	261	138	19	60	30
24	178	421	510	280	140	4,140	800	261	128	77	50	30
25	168	397	480	260	160	4,480	740	272	86	100	45	146
26	208	421	450	250	500	4,810	740	240	86	59	42	60
27	316	421	450	240	2,000	4,890	655	294	72	40	40	53
28	305	445	420	230	3,630	4,920	655	272	79	41	35	35
29	305	885	410	220	3,410	4,720	963	240	74	38	53	30
30	510	1,280	400	220		4,510	740	230	127	54	53	28
31	373		400	210		4,410		219		42	59	
Month	Maximum		Minimum		Mean		Per square mile		Run-off in inches			
October	510		93		198		0.366		0.42			
November	1,430		240		628		1.16		1.29			
December	1,500		400		829		1.53		1.76			
January	700		210		432		.799		.92			
February	3,630		140		476		.880		.95			
March	6,230		2,100		4,186		7.74		8.92			
April	4,240		655		1,893		3.50		3.90			
May	800		219		437		.808		.93			
June	483		72		187		.346		.39			
July	373		19		77.0		.142		.16			
August	411		30		86.9		.161		.19			
September	146		25		40.5		.075		.08			
The year	6,230		19		792		1.46		19.91			

OHIO RIVER BASIN

Allegheny River at Franklin, Pa.

Location.- Water-stage recorder, lat. 41°23'25", long. 79°49'10", at Eighth Street Bridge, at Franklin, Venango County, 1,000 feet below mouth of French Creek. Zero of gage is 956.26 feet above mean sea level.

Drainage area.- 5,982 square miles.

Records available.- October 1918 to September 1921, October 1931 to September 1936 in reports of U. S. Geological Survey; April 1905 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 18 years (1918-36), 9,492 second-feet.

Extremes.- Maximum discharge during year, 118,000 second-feet Mar. 28 (gage height, 19.02 feet); minimum, 470 second-feet Sept. 12 (gage height, 1.72 feet).

1905-36: Maximum discharge, 191,000 second-feet (revised) Mar. 26, 1913, from rating curve extended above 110,000 second-feet; maximum gage height, 26.0 feet, present datum, Feb. 27, 1917 (affected by ice); minimum discharge, 334 second-feet July 30, 1934 (gage height, 1.63 feet).

Maximum free-flow stage known, 25.0 feet, present datum, Mar. 17, 1865 (discharge, 196,000 second-feet, from rating curve extended above 110,000 second-feet).

Remarks.- Records good except those for periods of faulty recorder operation and ice effect, Dec. 14-21, Dec. 28 to Jan. 18, Jan. 25 to Mar. 6, which are fair and were determined from gage heights, weather records, one discharge measurement, and by comparison with records for the stations at Red House and at Parkers Landing.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,130	2,910	5,940	3,700	2,800	30,000	54,100	13,700	2,980	2,000	806	1,190
2	2,050	2,910	5,130	4,500	2,800	25,000	44,600	12,700	2,780	2,230	732	1,080
3	1,970	2,630	4,670	5,500	2,700	21,000	37,900	18,400	2,590	1,980	672	980
4	1,930	2,390	4,090	8,000	2,900	18,000	31,800	16,700	2,410	1,500	684	871
5	2,030	2,280	3,030	10,000	3,000	28,000	25,900	13,200	2,260	1,420	765	806
6	2,010	2,300	2,930	9,000	2,800	28,000	29,800	11,000	2,050	1,250	1,690	720
7	1,890	2,550	3,370	8,000	2,700	24,300	38,000	9,500	1,930	1,090	1,540	660
8	1,770	2,760	4,120	7,200	2,600	22,400	33,800	8,270	1,880	994	1,150	605
9	1,670	2,980	10,100	7,000	2,500	32,000	28,500	7,320	2,240	910	924	572
10	1,570	3,030	19,000	10,000	2,400	44,000	26,600	6,600	2,650	858	768	540
11	1,520	3,030	18,400	10,000	2,300	54,900	24,700	5,920	2,820	819	819	510
12	1,460	3,170	15,400	9,500	2,500	77,400	24,100	5,430	2,920	845	819	490
13	1,390	3,960	12,600	9,500	2,500	71,000	26,600	5,430	3,120	756	732	480
14	1,330	6,020	10,500	10,000	2,400	56,300	25,900	5,750	2,900	684	672	510
15	1,260	7,360	11,500	10,000	2,400	46,300	22,300	5,920	2,290	660	684	540
16	1,200	6,760	24,000	9,000	2,300	42,500	19,400	5,430	1,950	616	790	540
17	1,130	5,770	21,000	8,200	2,200	45,500	17,800	4,820	1,740	533	858	638
18	1,130	5,130	16,000	7,700	2,150	45,100	15,700	4,390	1,760	561	768	540
19	1,110	4,520	13,000	7,450	2,100	38,600	14,200	5,430	1,960	550	744	520
20	1,110	4,230	10,000	5,610	2,100	39,700	13,200	6,600	1,970	540	806	583
21	1,130	4,090	8,000	3,290	2,050	40,800	12,700	6,250	1,830	510	845	660
22	1,210	3,950	6,760	5,130	2,000	35,300	16,200	5,430	1,660	500	1,010	605
23	1,390	3,820	6,100	4,520	2,000	31,100	19,400	4,680	1,480	547	971	572
24	1,790	3,550	5,940	3,650	2,700	44,900	15,200	4,120	1,340	1,430	832	594
25	2,030	3,170	5,290	3,800	8,000	74,900	12,700	3,720	1,260	1,390	793	672
26	1,970	3,000	4,670	3,600	26,000	94,000	10,800	3,470	1,200	1,130	793	684
27	1,810	2,950	3,820	3,400	55,000	99,600	9,500	3,600	1,180	1,390	756	660
28	1,650	3,120	4,000	3,300	50,000	112,000	8,470	3,720	1,120	1,440	708	684
29	1,560	4,540	3,700	3,100	37,000	89,200	11,600	3,470	1,090	1,220	1,060	660
30	1,590	5,770	3,600	3,000	70,900	14,200	3,300	1,520	994	1,240	994	672
31	2,320		3,600	2,900		62,800		3,090		924	1,180	
Month	Maximum		Minimum		Mean		Per square mile		Run-off in inches			
October	2,820		1,110		1,633		0.273		0.31			
November	7,360		2,280		3,822		.639		.71			
December	24,000		2,930		8,718		1.46		1.68			
January	10,000		2,900		6,502		1.09		1.26			
February	55,000		2,000		8,086		1.35		1.46			
March	112,000		18,000		49,850		8.33		9.60			
April	54,100		8,470		22,820		3.91		4.25			
May	18,400		3,090		7,012		1.17		1.35			
June	3,120		1,090		2,019		.338		.38			
July	2,280		500		1,041		.174		.20			
August	1,690		672		887		.148		.17			
September	1,190		480		661		.110		.12			
The year	112,000		480		9,451		1.58		21.49			

Allegheny River at Parkers Landing, Pa.

Location.- Water-stage recorder, lat. 41°6'5", long. 79°40'45", at highway bridge at Parkers Landing, Armstrong County, 1.1 miles below mouth of Clarion River. Zero of gage is 845.14 feet above mean sea level.

Drainage area.- 7,671 square miles.

Records available.- October 1932 to September 1936.

Extremes.- Maximum discharge during year, 128,000 second-feet Mar. 28 (gage height, 19.30 feet, from floodmark in gage well); minimum, 628 second-feet July 23 (gage height, 0.86 foot).

1932-36: Maximum discharge, that of Mar. 28, 1936; maximum gage height, 20.60 feet Feb. 27, 1935 (affected by ice); minimum discharge, 409 second-feet July 30, 1934 (gage height, 0.67 foot).

Maximum stage known, 29.0 feet Mar. 17, 1865 (discharge not determined).

Remarks.- Records good except those for periods of missing gage record, Nov. 2-7, Apr. 22-25, July 18, which are fair and were determined by comparison with records for the station at Franklin, and those for period of ice effect, Dec. 24 to Feb. 27, which are poor and were determined from gage heights, weather records, and by comparison with records for stations upstream. Regulation at low stages from power operations on Clarion River.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	2,320	3,350	7,260	5,000	3,500	40,500	61,100	16,100	3,530	2,200	1,080	2,090		
2	2,630	3,430	6,110	6,000	3,400	32,900	52,400	15,100	3,610	2,950	1,210	1,710		
3	2,370	3,500	6,080	8,000	3,300	27,700	43,400	18,300	3,400	3,110	1,000	1,370		
4	2,180	3,150	5,360	11,000	3,400	25,200	38,400	20,500	3,170	2,800	896	1,270		
5	2,160	2,850	4,130	13,000	3,500	32,200	31,000	16,100	2,850	1,770	1,100	1,490		
6	2,460	2,700	3,650	12,000	3,400	34,900	32,900	13,600	2,800	1,660	1,340	1,080		
7	2,160	2,860	4,200	11,000	3,200	32,200	44,100	11,700	2,560	1,470	2,680	968		
8	2,020	3,380	5,240	10,000	3,100	28,300	40,500	10,400	2,160	1,470	2,460	896		
9	1,910	3,710	11,400	9,500	3,000	33,600	34,900	9,070	2,770	1,190	1,700	843		
10	1,840	4,060	22,800	13,000	2,900	51,200	32,900	8,280	3,300	1,100	1,170	809		
11	1,770	3,650	24,600	13,000	2,900	61,300	31,000	7,350	3,900	1,100	1,080	775		
12	1,710	3,700	20,500	12,000	2,800	98,200	28,400	7,550	3,900	1,150	1,230	950		
13	1,770	5,050	17,800	11,500	2,900	92,300	29,600	7,170	3,960	1,060	1,040	741		
14	1,560	7,000	16,100	12,000	3,000	70,500	30,300	6,820	4,120	950	1,020	707		
15	1,470	9,080	15,100	13,000	3,100	58,300	27,000	7,000	3,000	968	1,060	707		
16	1,430	9,080	24,000	12,000	3,000	55,100	24,000	6,820	2,630	826	950	741		
17	1,350	7,720	29,000	11,000	2,900	82,700	21,600	6,650	2,390	775	1,000	775		
18	1,330	6,120	24,600	10,000	2,800	105,000	20,000	5,520	2,320	740	1,040	878		
19	1,510	5,760	20,500	9,000	2,700	67,200	17,200	6,570	2,370	724	1,020	809		
20	1,470	5,820	16,500	8,500	2,600	55,600	15,600	8,870	2,580	690	1,000	724		
21	1,310	5,040	13,200	7,000	2,600	53,700	15,100	8,870	2,510	674	1,370	741		
22	1,330	5,040	9,440	6,500	2,500	47,600	19,800	8,090	2,040	644	1,360	826		
23	1,540	4,960	7,720	6,000	2,500	41,300	23,000	6,580	2,040	674	1,490	792		
24	1,790	4,610	7,200	5,500	3,500	54,500	18,700	5,520	1,820	1,400	1,190	775		
25	2,040	3,850	6,800	5,000	11,000	84,900	15,900	5,080	1,710	2,090	1,100	775		
26	2,270	3,800	6,200	4,800	35,000	105,000	13,600	4,930	1,470	1,580	1,560	809		
27	2,340	3,790	5,600	4,500	70,000	106,000	11,700	4,780	1,490	2,340	1,230	826		
28	1,980	4,080	5,200	4,300	61,400	122,000	10,800	4,780	1,660	2,250	1,080	809		
29	1,820	5,110	4,900	4,100	47,800	103,000	11,700	4,940	1,350	1,900	1,440	843		
30	1,770	7,250	4,600	3,900		81,400	15,100	4,720	1,780	1,310	2,070	986		
31	1,990		4,500	3,700		69,400		3,900		1,170	1,820			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October					2,630		1,310		1,858		0.242		0.28	
November					9,080		2,700		4,783		.624		.70	
December					29,000		3,650		11,620		1.51		1.74	
January					13,000		3,700		8,574		1.12		1.29	
February					70,000		2,500		10,270		1.34		1.44	
March					122,000		25,200		63,020		8.22		9.48	
April					61,100		10,800		27,060		3.53		3.94	
May					20,500		3,900		8,757		1.14		1.31	
June					4,120		1,350		2,640		.344		.38	
July					3,110		644		1,443		.188		.22	
August					2,680		896		1,316		.172		.20	
September					2,090		707		950		.124		.14	
The year					122,000		644		11,900		1.55		21.12	

OHIO RIVER BASIN

Ohio River at Sewickley, Pa.

Location.— Water-stage recorder, lat. 40°31'50", long. 80°11'20", 200 feet above highway bridge at Sewickley, Allegheny County, half a mile above mouth of Narrows Run, and 1½ miles above Dashields Dam. Zero of gage is 690.00 feet above mean sea level.

Drainage area.— 19,500 square miles.

Records available.— October 1933 to September 1936.

Extremes.— Maximum discharge during year, 574,000 second-feet Mar. 18 (gage height, 34.75 feet, from floodmark in gage house); minimum, 2,600 second-feet Sept. 26 (gage height, 2.60 feet).

1933-36: Maximum discharge, that of Mar. 18, 1936; minimum, about 2,000 second-feet July 25, 1934; minimum daily discharge, 2,150 second-feet July 25, 1934.

Remarks.— Records good except those below 4,000 second-feet and those for period of ice effect, which are fair. Discharge for period of ice effect, Jan. 26 to Feb. 3, determined from gage heights, weather records, and by comparison with records for stations upstream. Records for period of recorder failure, Apr. 2-9, based on stage-relation curve with upper gage at Dashields Dam. Some regulation at low stages from operation of locks upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	5,360	8,680	13,400	13,300	11,000	97,200	95,000	22,200	7,280	3,680	8,500	12,300		
2	6,000	9,400	13,100	13,800	11,000	79,600	86,200	21,500	6,640	4,430	6,640	9,670		
3	6,400	8,230	12,300	20,000	11,500	70,800	81,800	20,800	6,480	4,990	4,850	8,140		
4	6,160	7,690	11,800	76,800	13,200	64,300	73,000	23,000	6,240	6,400	4,360	7,690		
5	5,600	7,120	10,300	86,200	16,800	68,600	62,200	23,700	5,600	7,040	4,220	7,280		
6	5,360	7,120	9,490	68,600	25,700	79,600	73,000	20,800	5,060	26,600	5,060	6,000		
7	5,360	7,280	9,220	57,000	29,800	70,800	150,000	18,800	5,360	33,600	7,910	5,200		
8	5,280	8,140	10,300	58,000	26,000	60,600	134,000	16,900	5,680	18,800	10,700	4,360		
9	4,710	8,680	19,700	62,200	18,100	50,100	95,000	15,600	5,760	12,400	8,770	4,010		
10	4,640	9,220	60,300	90,600	16,200	63,700	79,600	13,700	6,480	9,040	6,680	3,620		
11	4,640	10,100	70,800	92,800	15,000	85,900	77,400	12,300	8,590	7,520	5,360	3,740		
12	4,570	10,200	58,000	68,600	13,500	132,000	75,200	11,400	9,580	6,400	4,500	3,870		
13	4,430	16,800	47,600	53,800	13,100	167,000	68,600	11,800	10,100	5,360	4,570	4,570		
14	4,920	41,200	52,800	49,600	20,400	126,000	66,400	12,100	12,200	4,640	4,710	4,220		
15	5,520	47,600	68,700	47,600	39,600	103,000	60,100	12,900	10,700	4,710	4,150	4,500		
16	4,850	35,900	77,400	44,600	80,700	99,300	51,700	13,700	8,140	4,500	3,740	4,010		
17	4,290	26,100	84,000	41,600	68,600	195,000	45,600	12,100	6,800	4,290	3,560	3,680		
18	4,290	17,800	70,800	38,600	48,600	465,000	39,600	12,500	6,640	3,620	3,440	3,260		
19	4,290	16,200	54,800	40,600	43,600	440,000	33,900	11,300	6,160	3,620	3,560	2,960		
20	4,500	15,000	43,600	33,900	36,900	210,000	29,900	14,400	6,160	3,260	3,800	2,900		
21	4,640	14,400	34,800	32,100	28,700	147,000	26,900	19,400	5,680	3,020	3,920	3,020		
22	4,360	12,800	21,600	29,400	23,000	139,000	26,900	18,100	5,280	2,900	5,200	2,900		
23	4,360	13,500	17,400	26,100	18,800	129,000	28,600	15,000	4,640	3,020	4,850	2,900		
24	4,850	11,800	16,800	18,800	15,600	137,000	30,300	12,100	4,150	4,970	5,200	2,900		
25	7,040	10,500	18,800	15,000	27,500	211,000	26,100	11,100	3,900	4,850	5,930	3,500		
26	10,600	9,670	15,000	13,500	116,000	242,000	23,700	9,940	3,870	6,320	6,720	2,660		
27	9,130	10,300	12,100	12,500	187,000	215,000	18,800	9,400	3,740	6,400	9,130	2,780		
28	7,360	10,100	12,400	11,800	207,000	202,000	18,800	8,770	3,440	11,500	8,770	2,960		
29	6,090	9,940	12,100	11,500	134,000	185,000	18,800	8,410	3,620	18,800	11,000	6,850		
30	5,920	11,100	11,800	11,200	158,000	20,900	20,900	8,320	4,150	12,000	33,800	9,940		
31	6,380	11,500	11,500	11,100	110,000	110,000	8,950	8,950	8,500	19,000				
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October					10,600		4,290		5,561		0.285		0.33	
November					47,600		7,120		14,420		.739		.82	
December					84,000		9,220		31,700		1.63		1.88	
January					92,800		11,100		40,360		2.07		2.39	
February					207,000		11,000		45,410		2.33		2.51	
March					465,000		50,100		147,900		7.58		8.74	
April					150,000		18,800		57,260		2.94		3.28	
May					23,700		8,320		14,540		.746		.86	
June					12,200		3,440		6,267		.321		.36	
July					33,600		2,900		8,296		.425		.49	
August					33,800		3,440		7,181		.368		.41	
September					12,300		2,660		4,980		.250		.29	
The year					465,000		2,660		32,030		1.64		22.36	

ALLEGHENY RIVER BASIN

Brokenstraw Creek at Youngsville, Pa.

Location.— Chain gage, lat. 41°51'5", long. 79°19'5", at highway bridge at Youngsville, Warren County, 1,000 feet above mouth of Mathews Run. Zero of gage is 1,187.92 feet above mean sea level.

Drainage area.— 304 square miles.

Records available.— October 1919 to September 1921, October 1931 to September 1936 in reports of U. S. Geological Survey; October 1909 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.— 22 years (1910-15, 1919-36), 535 second-feet.

Extremes.— Maximum discharge during year, 9,360 second-feet Mar. 27 (gage height, 10.8 feet, from graph based on gage readings) from rating curve extended above 2,500 second-feet; minimum, 28 second-feet at times in August and September (gage height, 0.08 foot).

1909-36: Maximum gage height, 13.2 feet, present datum, Mar. 25, 1913 (discharge not determined); minimum discharge, 19 second-feet Oct. 14, 1934.

Remarks.— Records fair except those for high stages and those for periods of ice effect, which are poor. Discharge for periods of ice effect, Dec. 23 to Jan. 12, Jan. 20 to Feb. 26, determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily gage readings.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	129	119	264	210	145	2,270	2,190	740	183	225	43	50
2	126	109	206	210	140	1,250	1,720	1,160	183	118	40	47
3	121	97	181	250	140	1,070	1,510	2,110	172	74	36	40
4	116	97	150	370	140	1,130	1,130	1,070	169	64	36	30
5	116	102	154	310	180	1,650	900	845	160	64	33	28
6	114	150	181	270	170	1,580	2,350	640	141	61	47	28
7	109	167	203	250	160	1,720	2,110	495	160	57	50	28
8	102	178	1,030	240	150	955	1,580	450	144	54	36	28
9	97	155	1,720	300	145	2,970	1,250	405	183	50	36	28
10	95	144	1,580	540	140	2,970	1,190	340	121	47	36	28
11	93	161	1,160	510	135	4,020	1,580	300	472	45	36	28
12	89	181	655	480	130	5,190	1,950	272	193	43	32	28
13	84	254	515	540	130	3,530	1,580	300	130	45	30	28
14	84	261	470	590	150	1,870	1,250	340	100	47	30	28
15	80	200	1,990	590	140	1,510	955	300	85	47	30	28
16	76	155	3,290	495	135	1,790	790	264	81	47	30	28
17	76	134	1,370	405	130	1,870	715	244	79	47	30	28
18	76	131	715	450	125	790	690	233	150	47	29	28
19	82	209	640	382	120	955	665	428	121	43	28	28
20	80	164	450	350	117	955	665	428	100	40	61	28
21	80	150	300	320	114	955	845	320	85	33	42	28
22	99	144	320	290	112	740	1,130	280	74	30	32	28
23	169	124	300	260	110	955	900	244	68	30	30	28
24	139	114	290	230	120	2,790	690	244	64	81	33	30
25	119	114	270	210	1,000	5,190	565	214	64	70	33	42
26	109	121	260	190	2,500	6,290	495	150	61	54	30	38
27	97	121	250	180	2,790	7,730	450	300	61	54	30	33
28	97	169	240	170	2,430	7,130	405	280	61	54	30	36
29	91	410	230	160	2,520	3,930	1,020	229	551	61	50	36
30	114	350	225	155	3,240	955	210	248	248	56	68	33
31	129		220	150		3,060		203		50	52	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					169	76	103	0.339		0.39		
November					410	97	166	.546		.61		
December					3,290	134	639	2.10		2.42		
January					590	150	324	1.07		1.23		
February					2,790	110	501	1.65		1.78		
March					7,730	740	2,647	8.71		10.04		
April					2,350	405	1,141	3.75		4.18		
May					2,110	150	453	1.49		1.72		
June					551	61	149	.490		.55		
July					225	30	59.3	.195		.22		
August					68	28	37.4	.123		.14		
September					50	28	31.6	.104		.12		
The year					7,730	28	523	1.72		23.40		

ALLEGHENY RIVER BASIN

Tionesta Creek at Nebraska, Pa.

Location.— Staff gage, lat. 41°28'25", long. 79°23'5", 500 feet below highway bridge at Nebraska, Forest County, a third of a mile below mouth of Coon Creek. Zero of gage is 1,079.00 feet above mean sea level.

Drainage area.— 481 square miles.

Records available.— October 1931 to September 1936 in reports of U. S. Geological Survey; October 1909 to September 1911 in reports of Flood Commission of Pittsburgh, 1911; August 1923 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.— 11 years (1925-36), 829 second-feet.

Extremes.— Maximum discharge during year, 14,400 second-feet Mar. 17 (gage height, 9.3 feet, from graph based on gage readings); minimum, 34 second-feet Sept. 23 (gage height, 0.18 foot).

1909-11, 1923-36: Maximum discharge, 21,900 second-feet (revised) Mar. 4, 1934 (gage height, 11.4 feet, from graph based on gage readings) from rating curve extended above 15,500 second-feet; minimum, 25 second-feet Sept. 7-10, 25, 1927.

Remarks.— Records fair except those for periods of ice effect, Dec. 4, 5, Dec. 23 to Jan. 17, Jan. 21 to Feb. 27, which are poor and were determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily gage readings.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	103	238	435	370	270	2,710	2,710	766	255	526	57	93
2	146	200	376	450	260	2,240	2,470	733	271	50	78	
3	135	180	353	550	250	1,820	2,240	1,050	214	177	44	74
4	111	172	350	700	260	1,450	1,720	975	200	133	61	66
5	103	172	360	600	310	2,510	1,440	870	177	116	55	57
6												
7	97	213	530	560	290	2,470	2,470	766	160	103	308	50
8	84	221	391	520	270	1,820	2,590	702	145	93	240	48
9	81	238	410	510	260	1,630	2,020	640	160	83	116	48
10	77	260	1,330	550	240	3,300	1,820	582	395	76	88	48
11	77	238	1,530	900	235	5,000	1,820	493	292	74	72	44
12												
13	75	255	1,260	850	230	7,440	1,820	487	267	74	68	41
14	73	362	1,010	800	220	10,300	1,820	493	255	68	61	41
15	73	800	940	750	210	6,300	1,620	582	190	63	57	42
16	73	905	870	710	220	3,630	1,440	582	157	61	53	46
17	70	645	977	690	250	3,090	1,260	553	139	57	53	46
18												
19	68	553	2,020	680	220	3,630	1,130	466	127	53	63	48
20	64	476	1,620	670	210	8,480	1,050	410	119	51	68	55
21	68	410	1,260	735	200	8,800	870	415	142	48	59	51
22	70	348	1,050	735	195	5,470	835	940	233	48	55	48
23	77	372	905	558	190	3,770	766	905	183	48	61	42
24												
25	75	362	735	540	185	2,960	835	670	127	48	66	37
26	86	335	558	680	182	2,470	1,090	553	103	44	63	37
27	97	326	560	520	180	2,710	835	498	95	48	53	36
28	150	264	490	490	210	4,860	800	456	95	208	63	48
29	165	255	460	440	600	7,110	766	456	90	154	53	66
30												
31	125	264	440	400	2,000	6,260	733	386	90	100	63	86
1	100	242	420	370	6,360	6,470	670	430	100	114	70	63
2	94	317	400	340	4,560	6,890	610	395	86	95	66	57
3	100	615	380	310	3,630	4,730	800	326	83	88	111	53
4	286	503	370	300		3,630	800	308	208	76	150	61
5	317		370	280		3,630		255		70	116	
Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches							
October	317	64	107	0.222	0.26							
November	905	172	358	.744	.83							
December	2,020	350	747	1.55	1.79							
January	900	280	566	1.19	1.36							
February	6,360	180	782	1.63	1.76							
March	10,300	1,450	4,438	9.23	10.64							
April	2,710	610	1,395	2.90	3.24							
May	1,050	255	585	1.22	1.41							
June	395	83	171	.356	.40							
July	526	44	105	.218	.25							
August	308	44	82.0	.170	.20							
September	93	36	53.3	.111	.12							
The year	10,300	36	786	1.63	22.26							

ALLEGHENY RIVER BASIN

011 Creek at Rouseville, Pa.

Location.— Chain gage, lat. 41°28'55", long. 79°41'40", at highway bridge 400 feet above mouth of Cherrytree Run, 1 mile above Rouseville, Venango County, and 1½ miles above former gaging station. Zero of gage is 1,028.33 feet above mean sea level.

Drainage area.— 300 square miles.

Records available.— June 1932 to September 1936.

Extremes.— Maximum discharge during year, 10,700 second-feet Mar. 27 (gage height, 9.8 feet, from graph based on gage readings); minimum, 27 second-feet Sept. 21-23 (gage height, 1.84 feet).

1932-36: Maximum discharge, that of Mar. 27, 1936; minimum, 22 second-feet July 29, Sept. 5, 7, 1934 (gage height, 1.76 feet).

Remarks.— Records good except those for periods of ice effect, Dec. 23 to Jan. 13, Jan. 19 to Feb. 27, which are poor and were determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily gage readings. Records include discharge of Cherrytree Run. Some regulation at low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1935-36

Daily and monthly discharge, in second-feet, 1900-1901												
Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	76	96	210	195	150	1,210	1,690	805	128	181	50	82
2	76	94	181	195	150	880	1,390	805	120	110	44	68
3	76	78	154	240	145	842	1,210	2,020	113	94	42	58
4	76	78	151	400	150	805	960	1,040	108	85	40	50
5	70	76	210	350	190	2,130	880	730	106	72	47	46
6												
6	68	113	196	260	170	1,590	2,130	590	101	60	196	39
7	62	133	181	240	160	960	1,910	465	92	54	89	42
8	57	128	277	220	155	1,120	1,210	410	98	54	58	37
9	57	133	1,490	290	150	4,010	1,300	360	118	47	46	34
10	57	123	960	600	145	4,010	1,490	297	103	43	43	32
11												
11	58	144	625	540	140	4,170	1,300	277	146	40	40	31
12	58	168	525	510	135	5,360	1,390	260	136	47	36	32
13	62	242	410	580	135	2,610	1,490	277	106	55	36	32
14	62	277	438	730	150	1,390	1,040	297	94	44	34	37
15	52	210	660	525	140	1,390	842	260	82	39	47	37
16												
16	50	181	2,080	465	130	1,800	730	226	72	37	47	34
17	49	151	1,120	360	128	1,300	660	210	74	34	50	50
18	52	141	768	360	126	768	625	226	113	33	37	34
19	55	131	590	320	124	1,040	625	385	126	32	37	30
20	62	149	495	290	123	1,040	525	297	94	32	47	30
21												
21	57	154	360	250	122	1,040	590	242	72	30	57	28
22	78	149	385	230	121	805	880	210	72	30	47	29
23	144	136	350	210	120	960	660	181	62	34	38	28
24	168	108	300	200	150	3,000	525	168	64	168	47	34
25	113	92	270	180	400	6,700	438	168	66	123	43	57
26												
26	98	106	250	175	1,500	7,290	410	154	62	62	62	49
27	92	116	240	170	5,000	7,250	360	181	60	133	46	38
28	82	196	220	165	3,700	6,590	338	181	68	118	42	36
29	78	410	215	160	1,910	2,740	1,210	168	57	76	101	39
30	92	277	210	155		2,250	920	151	146	70	108	37
31	101	200	155			2,740		136		58	80	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					168	49	75.4	0.251		0.29		
November					410	76	153	.510		.57		
December					2,080	151	475	1.58		1.82		
January					730	155	314	1.05		1.21		
February					5,000	120	549	1.83		1.97		
March					7,290	768	2,574	8.58		9.89		
April					2,130	338	991	3.30		3.68		
May					2,020	136	393	1.31		1.51		
June					146	57	95.3	.318		.35		
July					181	30	67.6	.225		.26		
August					196	34	58.0	.187		.22		
September					82	28	40.3	.134		.15		
The year					7,290	28	483	1.61		21.92		

ALLEGHENY RIVER BASIN

French Creek at Carters Corners, Pa.

Location.- Chain gage, lat. $41^{\circ}57'20''$, long. $79^{\circ}52'40''$, at highway bridge at Carters Corners (formerly called Kinneytown), Erie County, 4 miles northwest of Union City and 5 miles above mouth of South Branch of French Creek. Zero of gage is 1,235.7 feet above mean sea level.

Drainage area.- 208 square miles.
Records available.- October 1919 to September 1920; October 1932 to September 1936
in reports of U. S. Geological Survey; May 1910 to September 1936 in reports
of Watawa.

Drainage area.- 208 square miles.
Records available.- October 1919 to September 1920; October 1932 to September 1936 in reports in reports of U. S. Geological Survey; May 1910 to September 1936 in reports of U. S. Department of Forests and Waters.

Average discharge.— 20 years (1910-16, 1919-29, 1932-36), 409 second-feet.
Maximum discharge during year, 7,660 second-feet Mar. 25 (gage height, 10.0 ft.)
Minimum discharge during year, 1,000 second-feet (gaging station) from rating curve extended above and below gaging station.

Average discharge.- 20 years (1910-16, 1919-29, 1932-36), 4.03 second-feet Mar. 25 (gage height, 10.6 feet, from graph based on gage readings) from rating curve extended above extremes.- Maximum discharge during year, 7.860 second-feet Mar. 25 (gage height, 0.50

1910-36: Maximum discharge, 9,940 second-foot Mar. 25, 1913, from rating curve extended above 4,500 second-foot; maximum gage height, about 15.2 feet. Minimum discharge not determined.

Remarks.—Records good except those for extremely high stages, which are fair, and those for periods of ice effect, Dec. 5-7, Dec. 19 to Jan. 12, Jan. 16 to Feb. 25, which are poor and were determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations down-stream. Discharge for high stages determined from graphs based on twice-daily gage readings.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	92	86	242	240	145	1,860	1,790	560	56	56	13	15
2	114	83	208	380	145	1,580	1,150	431	51	40	12	10
3	140	74	189	650	140	770	940	390	51	30	12	13
4	127	68	168	800	140	672	628	331	49	22	12	13
5	118	81	160	680	140	1,240	558	276	45	24	11	10
6	137	163	160	580	140	1,240	1,000	200	45	23	13	11
7	131	186	230	510	135	890	1,000	168	42	20	12	11
8	118	137	640	490	135	840	628	144	45	16	15	9.0
9	99	108	1,800	480	135	1,180	582	131	53	18	17	8.5
10	83	108	1,540	550	130	1,620	560	103	43	12	16	8.5
11	80	116	840	480	130	3,540	560	103	88	18	12	7.5
12	85	149	538	440	130	4,700	840	106	72	17	12	10
13	78	226	452	473	130	1,880	840	178	49	13	10	10
14	69	208	410	538	135	920	890	331	40	13	10	9.0
15	62	166	719	452	140	1,100	628	236	46	13	11	8.5
16	60	137	1,110	380	135	1,720	516	151	36	13	10	9.0
17	60	140	567	320	130	872	451	112	34	15	12	11
18	55	122	474	280	125	465	451	90	45	13	10	13
19	58	103	400	250	125	453	452	211	39	12	10	9.5
20	68	127	340	230	120	550	452	140	31	11	11	10
21	69	217	300	220	120	650	695	116	27	11	12	9.5
22	69	203	280	210	120	560	1,080	92	25	10	11	9.0
23	120	158	260	200	120	1,080	695	78	25	10	11	10
24	122	151	245	190	130	3,780	452	72	27	27	13	12
25	103	110	230	180	500	5,980	312	66	26	22	12	8.0
26												
28	93	106	220	175	4,260	5,300	236	58	26	22	12	17
27	78	104	215	170	4,010	5,180	217	72	24	26	10	17
28	69	164	210	165	2,520	4,680	284	88	19	20	8.0	22
28	68	422	205	160	2,020	1,840	787	74	23	20	20	18
29	81	350	200	155		1,480	740	64	58	18	19	16
30			200	150		2,060				16	19	
31	95											

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October.....	140	55	90.4	0.435	0.50
November.....	422	68	152	.731	.82
December.....	1,800	160	444	2.13	2.46
January.....	800	150	361	1.74	2.01
February.....	4,260	120	568	2.73	2.94
March.....	5,980	453	1,951	9.38	10.81
April.....	1,790	217	678	3.26	3.64
May.....	560	58	169	.812	.94
June.....	88	19	41.3	.199	.22
July.....	56	10	19.4	.093	.11
August.....	20	8.0	12.5	.060	.07
September.....	22	7.5	11.5	.055	.06
The year.....	5,980	7.5	375	1.80	24.58

ALLEGHENY RIVER BASIN

French Creek at Saegertown, Pa.

Location.- Chain gage, lat. $41^{\circ}42'50''$, long. $80^{\circ}8'50''$, at highway bridge at Saegertown, Crawford County, half a mile above mouth of Woodcock Creek. Zero of gage is 1,093.74 feet above mean sea level.

Drainage area.- 629 square miles.

Drainage area. - 629 square miles.
Records available. - April to September 1921, October 1931 to September 1936 in reports of U. S. Geological Survey; April 1921 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 15 years, 1,021 second-feet.
Average discharge observed during year. 14,000 second-feet Mar. 26

Extremes.— Maximum discharge observed during year, 14,000 second-foot Mar. 26 (gauge height, 13.80 feet) from rating curve extended above 9,000 second-foot; minimum, 28 second-foot July 22 (gauge height, 2.22 feet).

1921-36: Maximum discharge, 17,000 second-feet Jan. 20, 1929 (gage height, 15.9 feet, from graph based on gage readings) from rating curve extended above 22 second-feet Oct. 18, 1934 (gage height, 2.10

Maximum stage known, about 17.9 feet, from floodmark, Mar. 26, 1913 (discharge, not determined).

Remarks. - Records good except those for extremely high and low stages, which are fair, and those for period of ice effect, Dec. 23 to Feb. 27, which are poor and were determined from gage heights, weather records, one discharge measurement, and by comparison with records for the stations at Carters Corners and at Utica. Discharge for high stages determined from graphs based on twice-daily readings. Regulation at low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1935-36

Daily and monthly discharge.												
Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	229	212	578	450	330	6,190	4,570	1,640	171	200	67	105
2	208	197	461	470	320	4,310	3,240	1,310	163	204	58	99
3	229	178	370	700	310	3,240	2,800	1,820	156	141	53	85
4	255	185	343	1,600	310	2,910	2,990	1,390	131	118	53	74
5	246	204	343	2,000	310	3,590	1,260	994	131	93	53	67
6	224	298	403	1,800	300	3,830	3,140	847	131	82	60	62
7	224	317	482	1,600	290	3,130	3,710	678	134	72	58	51
8	224	298	720	1,500	290	2,490	2,490	565	134	64	62	42
9	212	283	2,590	1,500	280	3,240	2,390	492	175	60	53	46
10	185	264	3,590	1,800	280	4,440	2,390	423	241	58	51	37
11	174	246	2,490	1,700	280	6,190	2,190	378	167	51	51	33
12	170	274	1,730	1,600	280	8,120	2,440	341	260	51	51	33
13	167	328	1,510	1,700	280	9,020	3,300	434	196	51	42	33
14	150	414	1,150	1,800	290	4,830	2,700	646	159	48	42	33
15	143	581	1,500	1,700	300	3,130	2,000	744	134	42	42	35
16	140	322	3,300	1,400	290	4,310	1,550	534	131	41	42	33
17	134	283	3,360	1,200	280	3,830	1,510	417	121	39	42	39
18	134	251	2,190	1,100	270	1,470	1,230	373	112	37	39	37
19	143	233	1,640	1,000	260	1,640	1,310	395	134	37	41	39
20	137	229	1,310	900	260	1,910	1,510	565	138	37	77	35
21	140	274	678	820	250	1,910	1,270	446	121	33	105	35
22	153	364	678	750	250	1,640	2,240	362	105	30	72	37
23	170	359	900	670	250	2,090	2,000	299	102	39	51	32
24	216	302	680	600	260	7,100	1,390	255	96	138	60	37
25	224	251	600	540	400	11,700	1,070	227	91	115	58	41
26	200	229	540	480	2,000	13,700	883	222	85	105	62	41
27	178	220	500	430	9,500	12,200	778	250	80	105	55	44
28	160	269	480	400	11,100	10,300	646	245	80	99	67	48
29	146	516	470	380	9,020	8,420	1,540	236	77	93	88	48
30	164	734	480	360		4,700	2,090	213	112	91	99	48
31	197		450	340		4,700		179		74	121	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					255	134	183	0.291		0.34		
November					734	178	297	.472		.53		
December					3,590	343	1,168	1.86		2.14		
January					2,000	340	1,074	1.71		1.97		
February					11,100	250	1,339	2.13		2.30		
March					13,700	1,470	5,170	8.22		9.48		
April					4,570	646	2,071	3.29		3.67		
May					4,700	179	578	.919		1.06		
June					1,640	77	136	.216		.24		
July					260	30	79.0	.126		.15		
August					204	39	60.5	.096		.11		
September					121	32	47.6	.076		.08		
The year					105							
					13,700	30	1,016	1.62		22.07		

French Creek at Utica, Pa.

Location.- Water-stage recorder, lat. $41^{\circ}26'15''$, long. $79^{\circ}57'20''$, at highway bridge at Utica, Venango County, a third of a mile above Mill Creek. Zero of gage is 1,019.54 feet above mean sea level.

Drainage area.- 1,028 square miles.

Records available.-August 1932 to September 1936.

Extremes.—Maximum discharge during year, 16,800 second-feet Mar. 27 (gage height, 11.57 feet) from rating curve extended above 8,000 second-feet; minimum, 56 second-feet July 23 (gage height, 1.09 feet).

1932-36: Maximum discharge, that of Mar. 27, 1936; minimum, 43 second-foot July 30, 1934 (gage height, 1.03 feet).

Maximum stage known, about 15.7 feet during flood of March 1913 (discharge not determined).

Remarks.-Records good except those for extremely high stages and those for periods of ice effect and for period of no gage record, which are fair. Discharge for periods of ice effect, Dec. 23 to Jan. 2, Jan. 25 to Feb. 27, determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations upstream. Discharge for period of no gage heights, Apr. 4-17, determined by comparison with records for stations upstream.

Daily and monthly discharge, in second-feet. 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	316	240	804	720	460	8,830	6,780	2,460	310	209	129	228
2	275	257	658	760	450	6,780	5,820	2,140	290	268	113	203
3	257	243	558	1,370	440	4,720	4,720	2,520	272	272	102	180
4	272	226	442	2,240	430	4,030	3,900	2,260	247	206	111	156
5	291	223	391	2,870	420	4,900	3,200	1,740	224	174	116	138
6	287	243	406	2,660	410	5,260	3,500	1,340	212	150	153	122
7	268	282	518	2,260	400	4,900	4,100	1,120	206	131	136	115
8	268	400	724	1,960	390	4,200	4,500	953	249	122	111	104
9	272	366	2,240	1,950	390	6,000	4,100	831	428	113	104	92
10	257	343	3,790	2,660	380	6,200	3,700	726	313	107	109	84
11	247	338	3,710	2,730	380	6,780	3,500	646	342	107	104	83
12	230	348	2,660	2,520	380	8,620	3,600	610	302	98	92	79
13	217	401	1,960	2,590	390	9,690	3,800	683	321	92	88	77
14	213	458	1,640	2,660	400	9,250	4,000	791	265	84	86	81
15	198	513	1,940	2,520	410	6,010	3,300	990	228	81	88	88
16	186	464	4,040	2,260	400	5,260	2,600	888	200	75	84	92
17	180	416	4,720	1,860	390	5,440	2,100	730	183	72	83	96
18	177	366	3,790	1,590	380	3,800	1,860	652	194	66	79	90
19	180	325	2,880	1,440	370	2,520	1,800	732	191	65	83	83
20	175	316	2,200	1,130	360	2,730	1,860	791	191	63	102	77
21	175	312	1,440	1,020	360	2,870	1,740	777	191	61	113	77
22	204	361	998	990	350	2,660	2,340	628	166	60	153	75
23	236	437	1,100	758	350	3,050	2,730	541	148	61	138	72
24	236	416	980	707	360	7,740	2,140	470	143	193	122	86
25	268	361	900	640	1,000	13,500	1,640	419	136	297	117	111
26	275	320	840	600	5,000	16,000	1,300	381	131	212	124	107
27	254	304	790	570	9,500	16,600	1,130	410	133	291	117	98
28	236	343	750	540	11,000	14,800	1,050	410	126	350	109	104
29	226	442	720	520	10,800	13,000	2,110	386	122	241	184	107
30	217	779	710	500		9,910	2,800	368	191	185	234	102
31	217		700	480		7,380		338		156	224	
Month					Maximum	Minimum	Mean	Per square mile	Run-off in inches			
October					316	175	236	0.230	0.27			
November					779	223	361	.351	.39			
December					4,720	391	1,613	1.57	1.81			
January					2,870	480	1,553	1.51	1.74			
February					11,000	350	1,612	1.57	1.69			
March					16,600	2,520	7,207	7.01	8.08			
April					6,780	1,050	3,057	2.97	3.51			
May					2,460	338	920	.895	1.03			
June					428	122	222	.216	.24			
July					350	60	150	.146	.17			
August					234	79	120	.117	.13			
September					228	72	107	.104	.12			
The year					16,600	60	1,434	1.39	18.98			

Cussewago Creek near Meadville, Pa.

Location.- Chain gage, lat. $41^{\circ}40'20''$, long. $80^{\circ}12'55''$, at highway bridge 4 miles northwest of Meadville, Crawford County. Zero of gage is 1,071.77 feet above mean sea level.

Drainage area.- 90.2 square miles.

Records available.— October 1918 to September 1920, October 1931 to September 1936 in reports of U. S. Geological Survey; May 1910 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Extremes.—Maximum discharge observed during year, 4,630 second-feet Mar. 25 (gage 12.40 feet) from rating curve extended above 1,000 second-feet; no

height, 13.30 feet) from rating curve extended above 1,000 second-1939, no
flow July 23, Sept. 7.
Maximum gage height, (estimated), 16.0 feet Mar. 25, 1913 (dis-

1910-36: Maximum gage height (estimated), 16.0 feet Mar. 25, 1913 (discharge not determined); no flow July 23, Sept. 7, 1936.

Remarks.- Records good except those for extremely high stages and those for period of ice effect, which are poor. Discharge for period of ice effect, Dec. 22 to Feb. 27, determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily readings. Slight regulation at low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.2	10	36	31	20	700	480	127	9.6	11	0.2	12
2	9.2	11	42	33	20	466	510	112	8.6	7.4	.2	11
3	8.8	10	40	40	22	267	452	123	7.8	5.1	1.2	9.4
4	7.4	9.0	36	70	25	225	276	225	6.2	3.8	1.7	7.4
5	5.5	9.2	34	180	23	267	189	145	6.0	2.5	1.8	5.5
6	4.9	14	33	250	22	411	305	97	6.0	1.7	2.0	1.6
7	4.2	15	54	190	21	495	411	62	6.0	1.1	2.2	0
8	4.0	16	101	150	21	452	452	44	5.5	1.0	.4	.1
9	3.4	15	260	130	20	361	277	33	9.4	.7	.2	.6
10	3.4	14	349	150	20	361	249	28	8.8	1.0	.5	1.6
11	3.8	16	373	200	19	398	276	23	7.6	.8	1.1	2.0
12	4.0	17	270	230	19	495	306	20	7.1	.7	.8	1.1
13	4.6	24	189	200	19	600	361	27	6.4	.6	1.0	.6
14	5.1	28	145	170	20	480	349	46	6.0	.5	1.1	.2
15	4.6	27	157	160	22	338	276	58	5.7	.4	1.0	.1
16												
16	3.8	23	270	150	21	306	225	45	5.5	.2	1.0	.7
17	3.2	20	495	100	20	349	175	34	4.4	.2	.6	3.8
17	3.4	17	526	55	19	361	145	21	2.7	.1	.5	8.6
18	3.4	16	424	39	18	327	117	30	2.7	.1	.6	24
19	3.4	16	270	34	18	225	102	40	2.7	.2	2.5	28
20												
21	5.5	19	169	31	17	163	102	42	2.3	.2	10	23
22	9.8	24	110	28	17	157	127	27	1.7	.2	13	17
23	14	24	70	26	17	203	163	19	1.6	0	9	14
24	15	21	55	24	18	699	112	16	1.4	22	5.3	8.6
25	15	19	45	23	40	3,740	87	14	1.4	20	7.6	4.9
26												
26	14	16	40	22	200	1,300	74	13	1.4	8.9	11	5.1
27	14	16	37	22	800	840	51	12	1.2	17	10	2.9
27	14	16	37	22	800	840	51	12	1.2	17	10	2.9
28	12	20	35	21	1,100	700	68	14	1.2	21	9.2	3.1
28	12	20	35	21	1,100	700	68	14	1.2	21	9.2	3.1
29	11	24	33	21	840	600	102	14	1.1	16	9	2.9
29	11	24	33	21	840	600	102	14	1.1	16	9	2.9
30	11	27	32	21		385	133	12	8.2	6.9	11	2.5
30	11	27	32	21		385	133	12	8.2	6.9	11	2.5
31	10		31	20		373				1.1	13	
31	10		31	20		373				1.1	13	
Month						Maximum	Minimum	Mean	Per square mile		Run-off in inches	
October.....						15	3.2	7.44	0.082		0.09	
November.....						28	9.0	17.9	.198		.22	
December.....						526	31	153	1.70		1.96	
January.....						250	20	91.0	1.01		1.16	
February.....						1,100	17	119	1.32		1.42	
March.....						3,740	157	550	6.10		7.03	
April.....						510	51	232	2.57		2.87	
May.....						225	10	50.7	.562		.65	
June.....						9.6	1.1	4.87	.054		.06	
July.....						0	0	4.92	.055		.06	
August.....						22	.2	4.15	.046		.05	
September.....						13	0	6.74	.075		.08	
The year.....						28						
						3,740	0	104	1.15		15.65	

ALLEGHENY RIVER BASIN

Sugar Creek at Sugarcreek, Pa.

Location.—Chain gage, lat. 41°25'45", long. 49°52'45", at highway bridge three-quarters of a mile north of Sugarcreek, Venango County, three-quarters of a mile above mouth, and 3 miles northwest of Franklin. Zero of gage is 1,016.03 feet above mean sea level.

Drainage area.—166 square miles.

Records available.—August 1932 to September 1936.

Extremes.—Maximum discharge during year, 6,080 second-feet Feb. 27 (gage height, 7.3 feet, from graph based on gage readings); minimum, 9.2 second-feet Oct. 22; minimum daily discharge, 12 second-feet Oct. 22.

1932-36: Maximum discharge, that of Feb. 27, 1936; minimum, that of Oct. 22, 1935; minimum daily discharge, 10 second-feet Oct. 14, 1934.

Remarks.—Records fair except those for periods of ice effect, Dec. 2-7, Dec. 22 to Jan. 8, Jan. 20 to Feb. 26, which are poor and were determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations in adjacent drainage areas. Discharge interpolated for Oct. 6. Discharge for high stages determined from graphs based on twice-daily gage readings. Some regulation at low stages from operation of mills upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21	31	80	70	64	574	723	396	85	66	38	58
2	23	27	70	73	62	493	755	546	82	46	36	46
3	22	25	60	150	62	443	574	820	74	54	38	41
4	22	23	50	290	64	443	520	632	75	52	50	38
5	21	27	41	220	70	493	452	374	64	44	58	32
6	21	42	42	180	64	574	1,100	311	66	41	142	35
7	21	36	53	160	60	420	787	266	62	35	61	34
8	17	47	167	150	57	483	602	232	66	34	45	30
9	21	41	844	375	54	2,040	520	206	72	31	41	28
10	19	40	328	400	52	1,200	723	186	77	32	35	26
11	19	55	265	328	50	1,170	632	174	82	27	34	26
12	18	69	246	285	49	1,800	787	172	78	24	29	22
13	16	106	197	350	48	762	574	177	72	27	30	26
14	19	100	201	328	50	632	493	172	61	28	21	28
15	18	76	393	305	53	602	352	149	59	24	32	32
16	15	69	928	265	50	692	374	140	55	26	34	25
17	19	52	485	214	47	574	352	130	50	22	41	43
18	16	58	328	214	45	468	332	156	64	22	24	28
19	18	51	285	161	44	493	292	332	69	21	26	27
20	21	49	228	160	43	468	273	209	61	22	48	21
21	23	51	182	155	42	443	332	161	54	21	36	23
22	12	51	150	150	42	443	396	144	45	21	32	20
23	55	44	130	130	42	520	332	124	41	21	28	22
24	47	33	100	115	44	2,720	273	115	42	188	28	26
25	31	29	88	105	350	4,710	266	109	41	53	31	40
26	29	39	80	95	1,600	3,130	242	99	43	35	32	28
27	27	34	76	86	3,980	3,420	203	219	38	183	31	26
28	27	67	74	80	1,510	1,960	222	120	40	78	26	26
29	25	123	72	74	956	1,120	622	103	38	55	96	30
30	34	95	71	70		887	420	98	118	48	61	27
31	21	70	66	66	755			90		42	54	
Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches							
October	55	12	23.2	0.140	0.16							
November	123	23	53.0	.319	.56							
December	928	41	206	1.24	1.43							
January	400	66	187	1.13	1.30							
February	3,980	42	333	2.01	2.17							
March	4,710	420	1,127	6.79	7.83							
April	1,100	203	484	2.92	3.28							
May	820	90	231	1.39	1.60							
June	118	38	62.5	.377	.42							
July	183	21	45.3	.273	.31							
August	142	21	42.5	.258	.30							
September	58	20	30.3	.183	.20							
The year	4,710	12	236	1.42	19.34							

ALLEGHENY RIVER BASIN

Clarion River near Piney, Pa.

Location.—At hydroelectric plant of the Clarion River Power Co., lat. 41°11'30", long. 79°26'0", 2½ miles upstream from Piney, Clarion County, and 3 miles southwest of Clarion.

Drainage area.—951 square miles.

Records available.—October 1933 to September 1936 in reports of U. S. Geological Survey; October 1924 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.—12 years, 1,514 second-feet.

Remarks.—Discharge computed from power-house records. Part of monthly table corrected for storage. Records furnished by Clarion River Power Co.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	263	226	290	764	975	3,360	3,960	1,190	404	287	298	291
2	125	720	1,010	1,040	272	3,240	3,850	1,700	391	548	63	63
3	69	83	891	1,600	704	3,060	4,900	286	510	811	63	63
4	57	140	690	1,570	694	3,350	3,720	1,260	321	74	294	459
5	280	307	621	811	510	5,670	1,480	1,060	485	63	63	63
6	57	541	900	1,330	596	5,700	4,730	935	454	63	541	63
7	58	554	1,030	1,030	719	5,500	4,790	837	63	262	641	63
8	58	563	642	1,050	894	4,540	3,660	785	267	63	493	91
9	59	1,090	2,150	1,790	63	4,660	3,770	934	1,030	63	63	63
10	59	438	3,230	1,970	366	5,490	4,170	746	341	108	175	63
11	59	157	3,100	1,790	528	8,060	4,080	1,060	868	151	286	299
12	248	1,120	2,690	749	454	18,100	2,090	1,190	911	98	63	62
13	58	1,420	3,030	1,660	653	10,700	3,060	820	737	63	161	62
14	58	1,830	2,690	1,700	601	7,140	2,950	371	63	160	278	62
15	59	1,720	1,350	2,070	437	6,460	2,650	344	203	63	63	62
16	59	1,560	3,860	1,550	317	8,850	2,560	1,070	257	63	63	62
17	60	63	4,420	1,790	457	23,900	2,710	174	279	63	63	62
18	253	977	3,520	1,980	609	38,400	2,680	565	386	63	104	62
19	250	1,010	3,150	588	438	16,600	518	1,190	511	63	76	62
20	60	963	2,520	1,020	442	9,610	1,540	1,740	395	63	332	62
21	60	728	2,360	762	607	7,810	1,560	1,550	63	63	313	62
22	61	1,020	270	1,700	461	6,310	2,060	1,420	255	63	250	63
23	343	917	1,580	657	63	6,280	1,700	619	259	63	63	63
24	61	63	1,890	695	862	6,970	1,090	411	231	397	63	63
25	172	799	1,220	1,240	1,420	7,950	2,210	742	63	63	346	63
26	302	533	931	748	3,760	7,810	406	756	64	339	63	63
27	61	975	744	778	5,420	7,370	1,320	807	406	334	127	63
28	61	803	814	850	5,680	7,970	1,200	730	63	255	141	63
29	92	1,430	344	835	5,590	5,760	1,200	1,430	96	63	332	221
30	62	1,720	643	619		5,090	1,050	337	334	63	141	63
31	268		909	862		4,000		503		63	592	

Month	Observed			Storage	Corrected for storage		
	Maximum	Minimum	Mean	Mean	Mean	Per square mile	Run-off in inches
October.....	343	57	122	+83	205	0.216	0.25
November.....	1,830	63	802	-28	774	.814	.91
December.....	4,420	270	1,725	+23	1,748	1.84	2.12
January.....	2,070	588	1,213	- 1	1,212	1.27	1.46
February.....	5,680	63	1,193	+14	1,207	1.27	1.37
March.....	38,400	3,060	8,571	+87	8,658	9.10	10.49
April.....	4,900	406	2,588	+34	2,622	2.76	3.08
May.....	1,740	174	889	+ 3	892	.938	1.08
June.....	1,030	63	357	+ 1	358	.376	.42
July.....	811	63	160	+ 1	161	.169	.19
August.....	641	63	213	- 7	206	.217	.25
September.....	459	62	97.5	- .3	97.2	.102	.11
The year.....	38,400	57	1,494	+18	1,512	1.59	21.73

Redbank Creek at St. Charles, Pa.

Location.- Chain gage, lat. 40°59'40", long. 79°23'30", at industrial railroad bridge at St. Charles, Clarion County, a quarter of a mile below mouth of Leatherwood Creek. Zero of gage is 976.24 feet above mean sea level.

Drainage area.- 528 square miles.

Records available.- October 1918 to September 1921, October 1931 to September 1936 in reports of U. S. Geological Survey; October 1909 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

reports of Pennsylvania Department of Forests and Waters.
Average discharge.- 23 years (1910-14, 1915-16, 1918-36), 875 second-feet.

Average discharge.— 23 years (1910-14, 1915-16, 1918-36), 875 second-feet.

1909-36: Maximum discharge, that of Mar. 18, 1936; minimum, 10 second-feet Aug. 9, 1910.

Remarks.- Records fair except those for periods of ice effect, Dec. 3-7, Dec. 23 to Jan. 3, Jan. 22, Jan. 25 to Feb. 26, which are poor and were determined from gage heights and weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily gage readings. Some regulation at low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	172	258	512	270	320	2,730	1,290	376	149	151	55	174
2	274	194	392	320	310	1,370	2,190	376	136	145	52	134
3	262	191	330	600	300	2,190	2,190	356	128	111	43	122
4	208	172	280	1,080	290	2,450	1,820	319	124	82	40	92
5	172	188	260	1,080	280	3,640	1,490	302	115	78	40	74
6	139	254	260	870	280	3,020	2,420	270	92	67	82	67
7	128	310	350	792	270	2,450	2,190	270	74	58	70	59
8	120	365	741	755	265	1,980	1,940	240	80	58	88	54
9	115	450	2,390	1,480	260	1,950	1,710	226	162	48	96	50
10	96	392	2,450	1,700	255	2,530	1,710	212	136	45	78	52
11	110	392	2,190	1,480	250	4,560	1,490	199	199	47	59	43
12	105	420	1,940	1,220	240	8,640	1,290	199	136	51	51	37
13	100	910	1,480	1,170	230	5,740	1,390	199	186	52	40	60
14	96	1,420	2,060	1,480	225	4,010	1,110	199	162	43	40	50
15	110	1,170	2,790	1,520	230	3,790	950	186	126	38	37	38
16	105	950	5,050	1,120	290	8,730	950	162	117	40	33	33
17	96	680	3,970	1,040	310	20,300	810	162	90	39	32	37
18	91	578	2,730	950	270	25,300	720	175	99	35	33	35
19	91	480	2,060	1,080	250	13,000	633	362	115	32	47	37
20	98	450	1,540	1,040	240	8,390	606	660	91	30	49	39
21	91	420	990	755	230	5,560	606	438	86	30	44	36
22	105	392	680	650	220	3,200	690	302	74	30	84	33
23	115	365	560	450	210	2,560	662	255	70	29	74	30
24	125	305	480	450	200	2,580	530	240	82	55	65	35
25	130	292	400	430	2,500	2,450	460	226	64	67	74	48
26	128	234	370	410	4,500	2,110	438	199	55	75	186	43
27	105	262	340	390	6,260	2,220	396	186	55	174	115	48
28	96	302	320	370	4,680	2,560	396	212	58	151	94	40
29	117	674	300	350	2,870	2,300	396	199	58	124	240	74
30	190	610	290	340		1,770	417	174	151	94	270	101
31	324		280	330		1,410		162		71	255	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					324	91	136	0.258		0.30		
November					1,420	172	469	.888		.99		
December					5,050	260	1,251	2.37		2.73		
January					1,700	270	831	1.57		1.81		
February					6,260	200	932	1.77		1.91		
March					25,300	1,370	5,016	9.50		10.95		
April					2,420	396	1,130	2.14		2.39		
May					660	162	259	.491		.57		
June					199	55	109	.206		.23		
July					174	29	69.4	.131		.15		
August					270	32	82.8	.157		.18		
September					174	30	59.2	.112		.12		
The year					25,300	29	866	1.64		22.33		

Mahoning Creek near Dayton, Pa.

Location.- Chain gage, lat. 40°54'5", long. 79°13'35", at Independence Bridge, three-quarters of a mile above mouth of Foundry Run, and 1 3/4 miles northeast of Dayton, Armstrong County. Zero of gage is 1,095.24 feet above mean sea level.

Drainage area.- 321 square miles.

Records available.- October 1920 to September 1921, October 1931 to September 1936 in reports of U. S. Geological Survey; August 1916 to September 1936 in reports of Pennsylvania Department of Forests and Waters

Average discharge.- 16 years (1920-36), 554 second-feet.

Extremes.- Maximum discharge observed during year, 22,800 second-feet Mar. 18 (gauge height, 14.53 feet) from rating curve extended on basis of slope-area determination; minimum, 23 second-feet July 18-21, Aug. 2 (gauge height, 1.59 feet).

1916-36: Maximum discharge, that of Mar. 18, 1936; minimum, 8.0 second-feet Oct. 17, 1928 (gage height, 1.40 feet).

Remarks.- Records fair except those for periods of ice effect, Dec. 23 to Jan. 3, Jan. 21 to Feb. 27, which are poor and were determined from gage heights, Weather Bureau records, and by comparison with records for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily gage readings. Slight regulation at low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	68	77	247	165	290	1,320	740	197	59	111	28	223
2	104	68	186	200	270	749	910	179	48	59	24	176
3	143	64	143	700	250	1,230	1,280	179	48	52	30	144
4	104	73	123	1,520	250	1,980	960	166	45	53	38	120
5	73	64	110	1,230	245	2,580	910	153	45	45	57	90
6	68	59	117	915	235	915	2,630	147	41	41	108	8
7	64	147	200	749	230	1,750	1,950	140	45	41	106	68
8	59	209	267	749	220	1,190	1,570	134	48	37	63	53
9	55	262	950	1,180	210	1,220	1,220	128	52	35	45	48
10	48	191	1,680	2,030	205	1,520	1,060	117	74	34	35	43
11	50	227	1,280	1,230	200	2,930	910	106	86	38	40	40
12	45	330	1,090	1,090	190	4,020	740	108	160	32	35	37
13	48	2,110	1,000	1,000	180	2,100	700	140	442	32	30	41
14	48	1,570	1,230	1,230	175	2,160	700	125	314	30	27	48
15	48	958	1,680	1,090	180	2,260	625	114	153	31	31	45
16	46	790	2,540	1,000	190	3,110	590	95	90	30	63	41
17	45	671	2,150	915	210	9,970	526	90	74	27	103	38
18	43	634	1,570	749	190	16,300	476	137	95	24	76	38
19	50	524	1,180	710	180	5,860	440	179	86	24	106	32
20	52	332	915	671	170	3,160	386	212	70	24	316	34
21	57	257	710	620	165	2,040	338	144	57	24	169	32
22	52	232	553	560	160	1,680	314	128	48	24	117	35
23	120	159	420	530	150	1,680	292	114	41	30	186	38
24	104	151	350	490	150	1,500	270	95	45	41	270	38
25	75	130	260	460	1,000	1,290	246	103	41	38	338	41
26	59	123	200	420	2,500	1,050	219	128	43	35	386	43
27	64	174	190	390	4,500	1,160	200	122	41	55	223	40
28	57	237	180	370	3,530	1,310	208	106	41	117	153	38
29	64	344	170	350	2,280	1,020	200	86	46	83	246	64
30	102	277	165	330		912	193	76	76	59	361	292
31	88		160	310		819		68		41	292	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October.....	143	43	67.8	0.211	0.24
November.....	2,110	59	381	1.19	1.33
December.....	2,540	110	710	2.21	2.55
January.....	2,030	165	773	2.41	2.78
February.....	4,500	150	645	2.01	2.17
March.....	16,300	749	2,590	8.07	9.30
April.....	2,630	193	727	2.26	2.52
May.....	212	68	150	.405	.47
June.....	442	41	85.1	.265	.30
July.....	117	24	45.5	.156	.16
August.....	386	24	132	.411	.47
September.....	292	32	70.0	.218	.24
The year.....	16,300	24	531	1.65	22.53

ALLEGHENY RIVER BASIN

Crooked Creek near Ford City, Pa.

Location.- Chain gage, lat. 40°43'0", long. 79°31'50", at highway bridge $\frac{3}{4}$ miles south of Ford City, Armstrong County, and 5 miles above confluence with Allegheny River. Zero of gage is 786.12 feet above mean sea level.

Drainage area.- 280 square miles.

Records available.- October 1918 to September 1921, October 1931 to September 1936 in reports of U. S. Geological Survey; October 1909 to September 1936 in reports of Pennsylvania Department of Forests and Waters. Records with datum 3.32 feet lower obtained at a site three quarters of a mile downstream prior to July 31, 1933.

Average discharge.- 25 years (1910-13, 1914-36), 436 second-feet.

Extremes.- Maximum discharge during year, 21,000 second-feet Mar. 18 (gage height, 17.86 feet, from floodmark) from rating curve extended on basis of contracted-opening determination; minimum, 1.8 second-feet July 23 (gage height, 0.74 foot).

1909-36: Maximum discharge, that of Mar. 18, 1936; minimum observed, 0.1 second-foot Sept. 11, 25, 26, 1932.

Remarks.- Records fair except those for periods of ice effect, Dec. 2-7, Dec. 22 to Jan. 3, Jan. 21 to Feb. 26, which are poor and were determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily gage readings. Slight regulation at low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	31	34	110	140	200	725	400	147	19	16	12	178
2	253	37	100	150	190	570	435	105	17	23	10	123
3	178	30	85	800	190	635	435	100	15	25	14	102
4	93	41	75	3,350	210	607	382	96	15	16	5.1	79
5	70	39	65	1,470	180	1,400	435	82	13	13	8.8	58
6	63	67	65	875	170	810	1,140	83	10	12	208	43
7	35	85	140	775	160	680	1,410	77	10	9.6	157	55
8	31	128	201	680	155	468	692	71	9.2	8.4	66	30
9	25	167	1,040	1,470	160	400	680	51	6.8	4.5	40	25
10	33	138	1,220	3,550	150	280	635	54	11	5.4	25	20
11	25	121	875	2,150	145	541	635	49	24	5.1	19	17
12	23	232	530	1,040	140	1,750	570	46	39	6.4	14	14
13	29	3,840	775	825	135	1,790	550	43	710	6.0	11	35
14	27	2,040	1,280	985	130	1,160	470	54	743	10	4.2	33
15	26	648	2,150	825	140	1,420	452	53	147	6.4	8.0	20
16	28	530	1,990	635	300	1,930	382	40	98	4.5	9.2	17
17	22	365	1,540	635	330	10,200	330	38	59	4.8	7.6	16
18	23	253	930	635	260	13,900	282	42	49	4.5	12	14
19	21	226	680	1,160	220	4,250	267	63	30	3.9	15	13
20	28	189	470	825	190	2,100	239	79	23	3.0	35	10
21	30	178	330	620	170	1,510	267	62	24	2.6	128	8.8
22	29	157	280	500	150	1,110	228	40	20	2.2	51	7.2
23	29	124	250	440	140	1,080	201	32	20	2.2	58	8.8
24	40	98	220	390	130	914	167	29	16	4.2	115	14
25	54	83	190	340	2,000	635	157	31	13	15	213	7.2
26	39	103	180	310	4,000	561	147	28	16	13	138	8.0
27	33	77	165	290	5,230	691	138	29	14	35	110	15
28	33	87	155	260	1,540	740	125	31	12	253	85	12
29	31	91	145	240	985	583	119	23	8.8	167	128	16
30	36	91	140	220		548	107	22	14	114	490	629
31	71	135	210			480		20		21	267	
Month	Maximum		Minimum		Mean		Per square mile		Run-off in inches			
October	253		21		48.0		0.171		0.20			
November	3,840		30		543		1.22		1.36			
December	2,150		65		533		1.90		2.19			
January	3,550		140		858		3.06		3.53			
February	5,230		130		624		2.23		2.40			
March	13,900		280		1,757		6.28		7.24			
April	1,410		107		416		1.48		1.65			
May	147		20		55.5		.198		.23			
June	743		6.8		73.5		.282		.29			
July	255		2.2		26.3		.094		.11			
August	490		4.2		79.4		.284		.35			
September	629		7.2		53.6		.191		.21			
The year	13,900		2.2		406		1.45		19.74			

ALLEGHENY RIVER BASIN

Stony Creek at Johnstown, Pa.

Location.- Wire-weight gage, lat. 40°19'0", long. 78°54'50", at Poplar Street Bridge, at Johnstown, Cambria County, $\frac{1}{2}$ miles above confluence with Little Conemaugh River. Zero of gage is 1,154.0 feet above mean sea level.

Drainage area.- 487 square miles.

Records available.- October 1918 to September 1921, October 1931 to March 1936 in reports of U. S. Geological Survey; July 1913 to March 1936 in reports of Pennsylvania Department of Forests and Waters (discontinued).

Average discharge.- 21 years (1914-35), 780 second-feet.

Extremes.- Maximum discharge during period, 59,000 second-feet Mar. 18 (gage height, 30.26 feet, from floodmark) from rating curve extended on basis of slope-area and contracted-opening determinations; minimum, 37 second-feet Oct. 26 (gage height, 0.98 foot).

1913-36: Maximum discharge, that of Mar. 18, 1936; minimum (estimated), 5 second-feet Sept. 8, 1929; minimum daily discharge observed, 13 second-feet Oct. 25, 1930.

Remarks.- Records fair. Discharge for periods of ice effect, Dec. 23, Dec. 28 to Jan. 2, Feb. 3-25, determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations in adjacent drainage areas. Discharge for period of no gage record, Mar. 18-31, determined by comparison with records for stations mentioned above. Discharge for high stages determined from graphs based on twice-daily gage readings. Diurnal regulation at low stages. Water supply for Cambria plant of Bethlehem Steel Co. diverted from Quemahoning Reservoir not included in records except in part of monthly table. Record of monthly diversion furnished by Bethlehem Steel Co.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	62	91	206	280	328	3,360						
2	71	61	177	290	309	2,640						
3	71	53	162	464	290	1,930						
4	54	57	126	680	400	1,610						
5	46	54	109	580	350	3,800						
6	51	64	149	486	310	3,040						
7	53	69	155	486	290	2,270						
8	54	75	393	508	270	2,180						
9	49	75	990	706	265	2,030						
10	46	84	815	1,390	260	3,080						
11	54	88	630	870	260	5,640						
12	58	275	532	870	265	6,380						
13	71	1,160	532	760	270	3,730						
14	69	930	1,290	990	290	2,530						
15	71	508	1,770	870	330	2,590						
16	54	404	2,180	930	380	4,100						
17	50	423	1,390	815	560	20,700						
18	57	384	1,050	760	500	35,700						
19	54	346	815	1,180	470	9,970						
20	51	346	680	1,110	440	5,690						
21	49	328	486	930	420	4,430						
22	46	298	464	815	400	3,490						
23	50	270	430	815	390	2,950						
24	47	206	404	732	470	2,840						
25	44	193	384	655	1,010	2,720						
26	43	219	365	655	6,170	2,540						
27	44	193	328	606	8,300	2,840						
28	44	213	310	605	5,000	2,590						
29	51	226	296	555	3,470	2,140						
30	146	219	290	532		1,880						
31	146		285	384		1,680						
Month	Observed			Diversion		Corrected for diversion						
	Maximum	Minimum	Mean	(Mean)		Mean	Per square mile	Run-off in inches				
October	146	43	60.0	106		168	0.355	0.41				
November	1,160	53	264	95.5		360	.771	.86				
December	2,180	109	587	93.7		681	1.46	1.68				
January	1,390	280	720	110		830	1.78	2.05				
February	8,300	260	1,120	117		1,237	2.65	2.86				
March	35,700	1,610	4,936	88.8		5,025	10.8	12.45				
April												
May												
June												
July												
August												
September												
The year												

Kiskiminetas River at Avonmore, Pa.

Location.- Wire-weight gage, lat. $40^{\circ}32'5''$, long. $79^{\circ}27'55''$, at highway bridge at Avonmore, Westmoreland County, 1 mile above mouth of Long Run. Zero of gage is 805.64 feet above mean sea level.

Drainage area.- 1,723 square miles.

Records available.— June 1907 to September 1913, October 1918 to September 1921, October 1931 to September 1936 in reports of U. S. Geological Survey; May 1907 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 29 years, 2,999 second-feet.

Average discharge.- 29 years, 2,999 second-feet.
Extremes.- Maximum discharge during year, 200,000 second-feet Mar. 18 (gage height, 47.2 feet, from floodmarks) from rating curve extended on basis of slope-area determination; minimum, 175 second-feet July 21, 22 (gage height, 2.85 feet).
1959, minimum observed, 80 second-feet.

1907-36: Maximum discharge, that of Mar. 18, 1936; minimum observed, 60 second-feet Sept. 18-27, 1908 (gage height, 1.6 feet).

Remarks.—Records fair except those for periods of ice effect and no gage record, which are poor. Discharge for periods of ice effect, Dec. 23 to Jan. 3, Jan. 21 to Feb. 25, determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations on tributaries upstream. Discharge for period of no gage record, Mar. 18 to Apr. 7, determined by comparison with records for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily gage readings. Slight regulation at low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	412	595	960	1,900	2,000	9,780	4,800	1,450	612	540	572	3,680
2	528	496	960	2,200	1,900	8,670	4,400	1,400	580	620	390	2,510
3	560	412	828	3,000	1,900	7,140	4,000	1,300	580	588	369	2,180
4	496	387	870	5,620	2,400	6,060	3,600	1,350	516	446	390	1,650
5	438	412	668	5,760	2,100	10,200	3,300	1,300	484	446	572	1,500
6	387	528	870	4,160	1,900	9,780	26,500	1,200	453	432	2,160	1,150
7	387	496	915	3,800	1,700	7,300	14,200	1,100	439	418	1,970	925
8	387	560	1,050	3,680	1,600	6,140	9,400	1,020	---	---	---	835
9	387	630	5,440	4,980	1,500	5,380	7,140	1,020	468	397	700	745
10	412	595	6,360	8,490	1,450	7,040	8,310	970	492	439	540	660
11	412	528	5,760	6,510	1,400	11,000	8,310	925	975	745	425	620
12	387	808	4,410	5,340	1,350	20,000	7,970	880	1,200	484	432	745
13	412	6,960	4,040	4,800	1,350	14,400	6,820	970	2,810	397	432	835
14	438	7,190	6,060	5,200	1,500	9,390	5,620	1,420	3,220	334	397	1,450
15	467	3,680	8,670	5,060	1,800	9,240	4,930	1,060	1,750	308	348	790
16	496	2,550	12,200	4,800	2,500	11,100	4,410	880	1,100	308	548	745
17	412	2,120	8,490	4,160	2,800	52,400	3,800	835	835	284	596	700
18	387	1,820	6,060	3,920	2,600	135,000	3,320	745	835	242	508	604
19	412	1,620	4,930	6,210	2,000	37,800	2,960	970	1,600	254	404	556
20	412	1,520	4,410	5,200	1,800	15,500	2,730	1,450	1,550	230	556	524
21	387	1,420	3,320	4,500	1,700	9,750	2,510	1,100	880	185	835	508
22	412	1,420	2,990	4,000	1,600	8,530	2,510	880	700	195	620	492
23	467	1,230	2,700	3,600	1,600	7,760	2,290	745	556	206	745	476
24	467	915	2,500	3,400	1,800	7,590	2,070	700	524	559	3,280	484
25	467	828	2,400	3,100	8,000	7,140	1,850	700	524	925	3,100	524
26	438	785	2,300	2,900	29,500	6,210	1,750	700	524	745	3,110	484
27	412	915	2,200	2,700	33,800	7,540	1,750	700	508	564	4,670	446
28	364	915	2,100	2,500	22,500	8,160	1,750	835	492	1,400	2,920	460
29	364	1,050	2,000	2,300	12,000	6,240	1,650	745	446	1,300	11,000	2,340
30	438	1,520	1,950	2,200	5,710	1,550	1,550	700	453	790	12,200	6,010
31	668		1,900	2,100		5,150		612		880	5,480	
Month						Maximum	Minimum	Mean	Per square mile		Run-off in inches	
October						668	364	436	0.253		0.29	
November						7,190	387	1,497	.869		.97	
December						12,200	668	3,558	2.07		2.39	
January						8,490	1,900	4,132	2.40		2.77	
February						33,800	1,350	5,171	3.00		3.24	
March						135,000	5,150	15,250	8.85		10.20	
April						26,500	1,550	5,207	3.02		3.37	
May						1,450	612	989	.574		.66	
June						3,220	432	875	.508		.57	
July						1,400	185	516	.299		.34	
August						12,200	348	1,980	1.15		1.33	
September						6,010	446	1,188	.689		.77	
The year						135,000	185	3,404	1.98		26.90	

Blacklick Creek at Blacklick, Pa.

Location.- Chain gage, lat. 40°28'25", long. 79°12'15", at highway bridge at Gratton, a quarter of a mile northwest of Blacklick, Indiana County, and three-quarters of a mile below mouth of Two Lick Creek. Zero of gage is 945.94 feet above mean sea level.

Drainage area.- 390 square miles.

Records available.— August 1904 to September 1913, October 1918 to September 1921, October 1931 to September 1936 in reports of U. S. Geological Survey; August 1904 to December 1905, January 1907 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 29 years (1907-36), 667 second-feet.

Average discharge.- 29 years (1907-36), 667 second-feet.
Extremes.- Maximum discharge during year, 51,700 second-feet-Mar. 18 (gage height, 15.88 feet, from floodmark) from rating curve extended on basis of slope-area determination; minimum, 39 second-feet July 18, 19, 22, 23.

1904-36: Maximum discharge, that of Mar. 18, 1936; minimum, 6 second-feet Sept. 12, 16-27, 1908 (gage height, 1.88 feet).

Remarks. - Records fair except those for periods of ice effect, which are poor and were determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations in adjacent drainage areas. Discharge for periods of no gage record, Jan. 5, 6, Mar. 19-21, Apr. 12, determined by comparison with records for stations mentioned above. Discharge for high stages determined from graphs based on twice-daily gage readings. Slight diurnal regulation at low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	70	96	210	310	340	2,120	920	258	100	188	63	830
2	119	86	185	450	320	1,740	920	258	92	115	56	630
3	88	70	174	1,740	300	1,440	920	302	87	87	52	555
4	76	70	155	1,500	450	1,230	750	292	76	94	68	384
5	68	68	155	1,500	400	2,650	670	253	73	89	115	275
6	60	102	270	1,200	350	2,120	4,310	226	74	76	710	216
7	62	105	178	1,080	300	1,500	2,530	198	66	70	308	186
8	58	148	403	896	270	1,180	1,820	180	70	66	140	147
9	55	135	2,400	1,450	260	1,280	1,400	168	68	63	109	136
10	60	129	1,740	2,510	250	1,810	1,820	161	71	62	87	125
11	64	122	1,500	1,500	250	2,990	1,820	154	138	71	78	125
12	70	255	1,130	1,230	260	3,970	2,160	144	184	66	74	115
13	70	2,890	1,080	1,280	270	2,550	1,400	150	1,060	57	65	130
14	64	1,660	1,740	1,620	290	1,760	1,250	216	485	63	59	245
15	86	854	2,380	1,340	320	2,070	1,150	150	264	49	62	140
16	66	620	3,670	1,180	360	3,360	920	140	158	45	135	111
17	60	484	2,250	940	450	20,000	790	111	122	44	202	98
18	62	392	1,560	1,080	390	29,400	710	128	202	40	113	85
19	68	320	1,230	1,860	350	7,850	590	354	630	42	92	80
20	66	364	940	1,280	340	3,570	590	348	226	41	520	83
21	66	331	584	1,080	330	2,720	520	211	164	42	231	71
22	70	305	516	896	320	2,540	590	168	128	40	270	73
23	86	236	470	800	320	2,530	465	147	98	46	211	77
24	88	152	440	740	1,200	2,470	420	144	98	184	1,960	80
25	83	138	390	680	2,800	1,960	390	138	98	147	892	90
26	73	202	370	620	6,540	1,630	366	125	92	85	1,570	85
27	68	174	350	580	7,450	1,960	336	144	87	425	750	74
28	66	174	330	540	4,160	1,850	336	175	78	421	520	536
29	70	236	320	520	2,380	1,390	308	130	76	158	3,540	1,120
30	135	214	315	450		1,220	302	120	96	98	2,130	1,650
31	122		310	380		1,100		109		76	1,200	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	135	55	74.8	0.192	0.22
November	2,890	68	371	.951	1.06
December	3,670	155	895	2.29	2.64
January	2,510	310	1,066	2.73	3.15
February	7,450	250	1,104	2.83	3.05
March	29,400	1,100	3,741	9.59	11.06
April	4,310	302	1,050	2.72	3.04
May	354	109	187	.479	.55
June	1,060	66	175	.449	.50
July	425	40	102	.262	.30
August	3,540	52	530	1.36	1.57
September	1,650	71	285	.731	.82
The year	29,400	40	800	2.05	27.96

MONONGAHELA RIVER BASIN

South Fork of Tenmile Creek at Jefferson, Pa.

Location.- Chain gage, lat. 49°55'25", long. 80°4'25", at highway bridge 1 mile southwest of Jefferson, Greene County, and 3 1/4 miles below mouth of Ruff Creek. Zero of gage is 852.54 feet above mean sea level.

Drainage area.- 180 square miles.

Records available.- October 1931 to September 1936.

Extremes.- Maximum discharge during year, 7,830 second-feet Mar. 17 (gage height, 13.54 feet, from floodmark) from rating curve extended above 1,500 second-feet; minimum, 0.4 second-foot at times in July and August (gage height, -0.03 foot). 1931-36: Maximum discharge, that of Mar. 17, 1936; minimum, 0.1 second-foot Sept. 22 to Oct. 2, 1932.

Remarks.—Records poor. Discharge for periods of ice effect, Dec. 25 to Jan. 3, Jan. 20 to Feb. 22, determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily gage readings. Slight regulation at low stages from pumpage at Waynesburg.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	4.1	10	24	65	100	425	238	76	3.9	0.8	5.1	49		
2	10	11	24	200	100	264	392	68	3.6	1.5	3.4	20		
3	9.9	11	23	700	100	380	396	53	3.0	1.7	2.6	17		
4	7.3	11	22	880	140	525	264	41	2.6	1.8	2.3	14		
5	7.3	10	22	560	300	595	179	40	2.4	233	2.3	10		
6	5.1	12	23	395	280	595	3,700	39	2.1	130	1.9	6.0		
7	4.9	14	25	980	250	525	2,040	36	2.6	48	2.1	4.0		
8	4.7	13	168	560	230	410	490	27	6.0	14	2.1	3.0		
9	4.5	12	560	980	210	294	630	26	3.6	6.4	1.8	2.0		
10	4.1	12	425	930	200	218	830	23	3.4	3.5	1.8	2.0		
11	3.5	20	350	595	190	190	525	22	30	2.6	1.6	2.0		
12	7.1	74	278	560	190	269	425	20	18	2.4	1.2	1.0		
13	12	630	380	425	200	276	365	19	8.8	2.1	1.1	1.0		
14	20	595	1,670	320	1,000	261	306	26	7.6	1.8	.8	1.0		
15	14	560	790	292	2,300	290	238	23	6.0	1.5	.7	2.0		
16	10	595	1,380	230	1,600	1,520	200	20	3.5	1.0	.6	1.0		
17	17	410	560	200	1,250	5,600	159	14	3.2	.6	.6	1.0		
18	15	278	410	230	1,050	1,980	136	14	2.9	.5	.4	.0		
19	13	166	365	380	900	1,230	124	17	2.7	.4	.4	.0		
20	12	70	292	350	800	1,160	93	17	2.6	.4	.4	.0		
21	8.5	56	175	280	600	2,390	90	14	2.4	.4	.5	.0		
22	11	43	200	230	500	1,960	81	12	2.1	.4	.4	.0		
23	15	34	186	200	490	1,550	74	11	2.0	.5	.4	.0		
24	28	26	162	170	490	1,400	59	9.2	1.8	.8	.4	.0		
25	26	19	130	140	3,570	985	53	7.2	1.8	.6	.4	.0		
26	25	18	100	130	2,590	771	59	7.2	1.6	.8	.6	.0		
27	21	18	80	120	1,730	592	72	6.4	.9	9.3	3.9	.0		
28	17	26	70	110	830	494	74	6.0	.5	337	1.9	.0		
29	13	36	63	105	630	389	56	5.3	.5	66	552	.0		
30	11	29	60	100		318	90	5.3	.7	23	241	.0		
31	10		60	100		275		4.4		9.6	86	.0		
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October					28		3.5		12.0		0.067		0.08	
November					630		10		127		.706		.79	
December					1,670		22		293		1.63		1.88	
January					980		65		368		2.04		2.35	
February					3,570		100		787		4.37		4.71	
March					5,600		190		907		5.04		5.81	
April					3,700		53		415		2.31		2.58	
May					76		4.4		22.9		.127		.15	
June					30		.5		4.43		.025		.03	
July					337		.4		29.1		.162		.19	
August					552		.4		29.7		.165		.19	
September					49		.5		4.98		.028		.03	
The year					5,600		.4		248		1.38		18.79	

MONONGAHELA RIVER BASIN

Youghiogheny River at Connellsville, Pa.

Location.— Water-stage recorder, lat. 40°1'5", long. 79°35'40", at Crawford Avenue Bridge, at Connellsville, Fayette County, three-quarters of a mile above mouth of Mounts Creek. Zero of gage is 860.13 feet above mean sea level.

Drainage area.- 1,326 square miles.

Records available.— October 1918 to September 1921, October 1931 to September 1936 in reports of U. S. Geological Survey; July 1908 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 27 years (1908-18, 1919-36), 2,482 second-feet.

Extremes.—Maximum discharge during year, 92,500 second-foot Mar. 18 (gage height, 20.28 feet) from rating curve extended above 40,000 second-feet; minimum, 100 second-foot July 21, 22 (gage height, 0.70 foot); minimum daily discharge, 155 second-foot July 21.

1908-36: Maximum discharge, that of Mar. 18, 1936 (maximum formerly published for Mar. 29, 1924, found in error; revised gage height, 19.4 feet, from floodmark); minimum, 11 second-feet Sept. 23, 26, 27, 1908, Oct. 18, 1910 (gage height, 0.11 feet).

Remarks.— Records good except those for extremely high stages and those for period of ice effect, which are fair. Discharge for period of ice effect, Dec. 28 to Jan. 4, determined from gage height, weather records, and by comparison with record for station at Sutersville. Discharge determined for periods of recorder failure, July 29–31, Sept. 29, 30, determined by comparison with the record for the station at Sutersville. Regulation from operation of hydro-electric plants upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	352	507	850	850	1,250	8,760	4,320	1,560	409	669	881	1,920
2	628	370	684	1,100	1,220	7,160	3,980	1,500	441	514	698	1,400
3	530	402	580	4,500	1,120	5,870	4,270	1,150	397	378	510	1,680
4	470	408	501	5,800	1,290	5,260	3,710	1,080	394	275	446	1,500
5	402	368	342	5,450	1,680	7,990	3,260	1,490	311	361	673	1,210
6	542	436	520	3,890	1,810	7,380	12,800	1,440	261	295	1,700	980
7	400	422	794	3,710	1,680	5,840	13,300	1,380	382	446	2,360	720
8	284	400	1,580	4,720	1,330	4,720	8,300	1,330	1,010	379	1,310	564
9	320	560	6,000	5,630	1,330	4,590	6,290	1,260	989	372	874	564
10	290	558	5,650	10,800	1,170	6,490	7,160	1,010	778	350	608	611
11	322	506	4,180	7,400	1,080	9,050	6,940	762	652	412	746	571
12	570	501	3,260	5,350	1,070	12,900	6,720	1,090	918	482	665	589
13	725	1,490	2,840	4,460	1,040	9,210	5,450	1,270	1,830	408	504	670
14	534	3,080	4,400	5,350	1,270	6,560	4,750	1,630	1,620	190	390	667
15	466	1,870	6,290	4,560	3,500	6,110	4,180	1,650	972	363	516	508
16	398	1,320	7,600	4,180	5,250	6,450	3,620	1,350	794	320	520	608
17	334	1,160	6,080	3,620	4,850	38,400	3,260	1,060	650	262	416	458
18	310	1,190	4,360	3,260	4,750	58,100	2,760	826	564	220	230	370
19	413	1,080	3,440	4,610	4,460	20,000	2,370	1,340	500	336	526	400
20	470	971	2,840	4,080	3,620	11,400	2,010	1,350	525	317	789	380
21	396	998	2,030	3,440	3,100	10,200	1,940	1,030	500	155	476	316
22	328	1,020	1,240	3,260	2,680	8,330	1,940	842	447	206	653	219
23	406	993	1,800	1,970	2,150	10,000	1,810	695	249	242	734	268
24	415	898	2,010	1,160	1,940	12,500	1,620	635	332	394	546	316
25	500	644	1,410	2,040	5,960	18,200	1,500	642	292	928	494	334
26	555	767	1,000	1,810	23,800	12,400	1,330	620	298	616	2,750	407
27	536	794	802	1,640	25,800	10,600	1,290	658	326	3,090	1,910	367
28	406	755	750	1,410	16,600	9,710	1,730	592	407	6,610	1,220	294
29	363	770	700	1,350	9,720	7,180	1,740	564	374	3,000	9,190	280
30	546	858	700	1,380		5,700	1,680	480	284	1,600	6,630	290
31	610		750	1,300		4,980		454		1,250	3,120	
Month					Maximum		Minimum		Mean		Per square mile	Run-off in inches
October.....					725		284		446		0.336	0.3

MONONGAHELA RIVER BASIN

Big Piney Run near Salisbury, Pa.

Location.- Water-stage recorder, lat. 39°43'32", long. 79°2'57", one-eighth of a mile above Little Piney Run, a quarter of a mile north of Maryland-Pennsylvania State line, and 2½ miles southeast of Salisbury, Somerset County.

Drainage area.- 24.5 square miles.

Records available.- June 1932 to September 1936.

Extremes.- Maximum discharge during year, about 4,100 second-feet Mar. 17 (gage height, 7.5 feet); minimum, 0.4 second-foot July 22, 23 (gage height, 1.05 feet) 1932-36: Maximum discharge, that of Mar. 17, 1936; minimum, 0.25 second-foot Sept. 13, 20-22, 1932.

Remarks.- Records excellent below 400 second-feet except those for periods of ice effect, Dec. 22-31, Jan. 24 to Feb. 28, which are poor and are based on records of nearby streams. Water supply for city of Frostburg diverted 3 miles above gage not included in records except in part of monthly table.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.2	5.3	8.7	12	18	206	64	13	2.2	3.1	1.8	2.8
2	4.4	4.2	7.7	13	18	174	59	14	1.9	2.0	1.4	2.8
3	3.2	4.2	7.7	27	17	136	53	28	1.8	1.6	1.2	3.8
4	3.1	4.0	6.8	34	17	130	44	22	1.7	1.4	1.2	3.4
5	2.9	3.8	8.0	30	17	194	42	21	1.7	1.7	6.8	2.6
6	3.6	3.1	7.1	26	14	183	254	19	1.6	1.7	6.6	2.0
7	4.8	4.0	6.6	35	13	157	219	17	1.6	1.3	4.4	1.8
8	3.2	6.6	16	38	11	151	160	15	2.8	1.2	2.8	1.7
9	3.2	5.0	32	70	11	146	136	13	2.0	1.0	2.2	1.6
10	2.6	4.0	28	132	10	208	114	11	3.9	.8	1.8	1.4
11	3.2	4.4	35	86	10	877	96	10	3.4	.6	1.7	1.4
12	11	5.3	30	65	9	569	83	10	3.7	.6	2.3	1.2
13	5.5	46	33	64	9	243	72	9.7	9.0	.5	2.0	1.6
14	3.6	29	73	63	13	179	59	14	7.1	.5	1.3	1.3
15	3.6	22	88	63	29	164	52	9.4	4.0	.5	1.7	1.3
16	2.3	19	120	68	41	183	43	8.0	1.9	.5	1.2	.9
17	2.6	20	99	58	39	2,060	37	7.4	1.6	.5	1.0	.8
18	2.3	21	72	59	38	1,100	32	7.4	4.7	.5	.9	.7
19	3.2	19	54	57	37	348	28	7.7	1.8	.4	1.8	.7
20	3.6	20	38	65	37	211	25	6.8	1.3	.4	3.4	.6
21	3.1	19	27	59	36	179	22	5.5	1.2	.4	3.6	.6
22	3.2	18	35	53	36	162	23	5.0	1.0	.4	3.4	.6
23	3.4	14	27	37	36	155	20	4.6	1.0	.5	6.9	.6
24	2.8	13	23	45	35	278	17	4.0	1.4	1.6	4.2	.6
25	2.8	11	20	42	65	411	15	4.4	1.6	1.6	3.6	.8
26	2.2	13	17	36	380	250	16	4.6	1.1	.8	4.8	.7
27	1.8	12	15	30	550	219	15	3.6	.9	12	5.3	.6
28	2.2	13	16	27	370	185	16	2.8	.9	39	3.8	.5
29	12	13	14	23	208	155	15	2.4	.9	5.5	4.8	.5
30	11	9.4	13	22		115	14	2.4	1.2	2.8	4.6	.9
31	6.3		12	21		85		2.3		2.0	3.4	
Month	Observed			Corrected for diversion								
	Maximum	Minimum	Mean	Mean	Per square mile	Run-off in inches						
October	12	1.8	4.09	4.27	0.174	0.20						
November	46	3.1	12.8	12.9	.527	.59						
December	120	6.6	31.9	32.0	1.31	1.51						
January	132	12	47.1	47.2	1.93	2.22						
February	550	9	73.2	73.5	3.00	3.24						
March	2,060	85	316	316	12.90	14.87						
April	254	14	61.5	61.5	2.51	2.80						
May	28	2.3	9.84	10.1	.412	.48						
June	9.0	.9	2.36	2.72	.111	.12						
July	39	.4	2.82	3.25	.133	.15						
August	34	.9	4.08	4.53	.185	.21						
September	3.8	.5	1.36	1.84	.075	.08						
The year	2,060	.4	47.4	47.6	1.94	26.47						

MONONGAHELA RIVER BASIN

Laurel Hill Creek at Ursina, Pa.

Location.- Chain gage, lat. 39°48'55", long. 79°19'40", at highway bridge at Ursina, Somerset County, 2 miles above mouth. Zero of gage is 1,329.06 feet above mean sea level.

Drainage area.- 121 square miles.

Records available.- August to September 1913, October 1918 to September 1921, October 1931 to September 1936 in reports of U.S. Geological Survey; August 1913 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 20 years (1916-36), 275 second-feet.

Extremes.- Maximum discharge during year, 10,300 second-feet Mar. 17 (gage height, 10.28 feet, from floodmark) from rating curve extended on basis of slope-area determination; minimum, 3.2 second-feet July 21-23 (gage height, 1.58 feet) 1913-36: Maximum discharge, that of Mar. 17, 1936; no flow Aug. 22, 1917, Feb. 15, 1919; minimum daily discharge observed, 1 second-foot Aug. 22, Sept. 1, 1917.

Remarks.- Records fair except those for periods of ice effect, Dec. 2-8, Dec. 22 to Jan. 9, Jan. 24 to Feb. 25, which are poor and were determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily gage readings. Some regulation at low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21	25	77	130	120	975	335	83	45	39	25	325
2	41	24	70	170	115	740	335	90	37	32	22	260
3	35	24	63	280	115	610	320	86	34	24	18	283
4	24	21	60	220	120	578	325	90	34	20	17	197
5	21	21	58	200	115	1,120	278	77	25	24	43	136
6	21	27	70	190	110	905	2,060	69	28	18	238	117
7	22	29	105	250	105	675	1,220	55	27	14	201	97
8	20	34	300	400	100	543	740	61	124	8.2	147	77
9	21	37	1,380	1,000	95	637	838	55	100	10	53	58
10	20	29	772	1,040	92	1,100	740	53	51	6.8	39	53
11	18	28	515	642	88	1,830	675	55	58	11	35	51
12	53	51	355	805	85	1,960	740	49	83	11	27	43
13	45	316	335	428	85	1,160	545	58	335	11	22	61
14	35	214	578	375	95	819	439	100	226	8.2	20	80
15	22	132	740	451	120	675	365	63	114	10	19	80
16	18	103	905	380	115	1,030	306	58	75	6.8	19	47
17	15	110	642	316	110	6,980	292	58	55	4.0	15	43
18	17	103	439	283	115	5,280	230	51	51	8.2	15	31
19	16	83	350	407	105	2,210	218	110	53	5.4	13	28
20	18	86	297	345	100	1,160	193	117	29	4.0	61	32
21	21	100	218	355	98	943	158	83	31	3.6	25	28
22	21	90	240	297	97	852	174	66	27	3.6	86	27
23	24	77	220	234	96	1,000	162	55	24	3.2	39	28
24	24	80	200	220	96	1,120	147	53	22	137	21	29
25	22	110	180	200	152	1,380	128	66	24	80	25	51
26	21	80	160	180	3,810	1,120	121	55	24	25	708	35
27	21	77	140	170	4,330	1,220	121	51	20	39	402	29
28	17	75	130	160	1,460	975	124	86	18	243	284	21
29	24	100	125	150	1,010	708	110	58	20	77	2,740	24
30	31	86	120	140		545	100	51	24	121	2,040	27
31	28		120	130		417		66		51	545	
Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches							
	Maximum	Minimum	Mean	Per square mile	Run-off in inches							
October	53	15	24.4	0.202	0.23							
November	316	21	79.1	.654	.73							
December	1,380	58	321	2.65	3.06							
January	1,040	130	340	2.91	3.24							
February	4,330	85	457	3.78	4.08							
March	6,980	417	1,331	11.0	12.68							
April	2,060	100	418	3.45	3.85							
May	117	49	68.6	.567	.65							
June	335	18	60.6	.501	.56							
July	243	3.2	34.2	.283	.33							
August	2,740	15	257	2.12	2.44							
September	325	21	79.9	.660	.74							
The year	6,980	3.2	290	2.40	32.59							

MONONGAHELA RIVER BASIN

Turtle Creek at Trafford, Pa.

Location.— Chain gage, lat. 40°23'20", long. 79°45'5", at highway bridge at Blackburn railroad station half a mile northeast of Trafford, Westmoreland County, 1 1/2 miles above mouth of Brush Creek, and 7 miles above confluence with Monongahela River. Zero of gage is 780.27 feet above mean sea level.

Drainage area.— 54.8 square miles.

Records available.— October 1920 to September 1921, October 1931 to September 1936 in reports of U. S. Geological Survey; July 1914 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.— 16 years (1920-36), 78.3 second-feet.

Extremes.— Maximum discharge during year, 3,700 second-feet Mar. 17 (gage height, 7.85 feet) from rating curve extended above 500 second-feet; minimum, 0.6 second-foot at times in July (gage height, 0.07 foot).

1914-36: Maximum discharge, 4,420 second-feet Mar. 15, 1933 (gage height, 8.5 feet, from graph based on gage readings) from rating curve extended above 500 second-feet; minimum, 0.1 second-foot Oct. 6, 7, 1922.

Remarks.— Records fair except those above 700 second-feet and those for periods of ice effect, which are poor. Discharge for periods of ice effect, Dec. 1-7, Dec. 21 to Jan. 3, Jan. 20 to Feb. 25, determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily gage readings. Some regulation at low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	4.8	13	33	86	98	97	24	5.4	3.2	0.7	5.8
2	12	6.4	12	41	85	89	90	23	5.1	2.3	.7	4.5
3	7.4	4.1	11	500	100	226	76	23	5.4	2.1	.7	6.1
4	4.3	4.1	10	198	120	172	63	24	4.8	1.8	.8	4.0
5	4.1	5.3	11	226	110	159	60	22	5.1	2.3	83	2.7
6	3.6	15	13	136	102	119	573	20	3.7	1.9	42	1.9
7	2.9	9.0	18	198	97	96	224	20	3.4	1.6	11	1.8
8	3.4	20	112	136	93	76	146	16	6.4	1.4	5.6	1.6
9	3.8	13	220	570	93	76	124	14	3.7	1.4	4.2	1.4
10	4.1	11	115	421	91	68	146	13	3.4	1.4	3.4	1.2
11	3.8	11	107	211	89	96	146	13	18	4.8	3.2	1.2
12	6.9	70	84	184	86	216	118	13	11	2.5	2.5	1.2
13	4.3	502	109	184	100	161	108	16	18	1.8	1.9	1.7
14	3.6	94	360	136	160	126	92	14	8.4	1.4	1.4	7.2
15	6.9	51	354	113	150	130	85	12	6.1	1.4	1.9	3.4
16	4.8	40	249	91	145	655	72	12	4.5	1.2	2.1	2.3
17	3.8	31	148	74	137	2,490	63	8.4	4.0	.9	1.8	1.8
18	5.3	24	111	172	128	1,350	55	9.6	10	.9	1.4	1.3
19	5.3	22	89	148	120	939	48	19	6.4	.8	1.4	1.2
20	4.1	25	72	135	116	420	46	13	4.5	.7	3.0	.9
21	4.1	20	73	125	113	355	46	8.4	3.7	.6	3.0	.9
22	13	17	68	118	111	384	46	8.8	2.5	.6	2.5	1.0
23	8.5	12	61	110	115	450	40	8.0	2.3	9.5	1.9	.8
24	7.4	16	57	104	150	473	37	6.7	2.5	38	1.8	1.2
25	6.4	18	52	100	1,000	310	35	14	2.7	3.9	1.9	1.3
26	5.9	13	47	96	811	237	32	8.4	2.1	3.0	2.5	1.0
27	4.8	8.5	42	93	513	393	32	10	2.3	10	6.0	1.0
28	4.8	19	39	91	219	213	34	7.4	2.3	4.0	4.1	.7
29	5.9	17	56	89	148	161	29	8.0	1.8	2.3	204	318
30	6.4	16	35	87	133	133	27	7.4	1.4	1.8	18	76
31	6.4		33	87	112	112		6.1	1.0	1.0	9.5	
Month					Maximum	Minimum		Mean	Per square mile		Run-off in inches	
October					13	2.9		5.77	0.105		0.12	
November					502	4.1		37.3	.681		.76	
December					360	10		89.1	1.63		1.88	
January					570	33		162	2.96		3.41	
February					1,000	85		186	3.39		3.66	
March					2,490	68		354	6.46		7.45	
April					573	27		93.0	1.70		1.90	
May					24	6.1		13.6	.248		.29	
June					18	1.8		5.45	.099		.11	
July					38	.6		3.55	.063		.07	
August					204	.7		13.8	.252		.29	
September					318	.7		15.7	.286		.32	
The year					2,490	.6		81.5	1.49		20.26	

BEAVER RIVER BASIN

Beaver River at Wampum, Pa.

Location.— Staff gage, lat. 40°53'15", long. 80°20'5", at highway bridge at Wampum, Lawrence County. Zero of gage is 736.24 feet above mean sea level.

Drainage area.— 2,235 square miles.

Records available.— June to September 1914, August 1932 to September 1936.

Extremes.— Maximum discharge during year, 42,500 second-feet Mar. 25 (gage height, 19.22 feet, from floodmark) from rating curve extended above 14,000 second-feet; minimum, 241 second-feet Oct. 7 (gage height, 2.20 feet).

1914, 1932-36: Maximum discharge, that of Mar. 25, 1936; minimum, 74 second-feet July 30, 1933 (gage height, 1.70 feet); minimum daily discharge, 27 second-feet July 22, Aug. 23, 1933.

Maximum stage known, about 29.9 feet Mar. 26, 1913 (discharge not determined).

Remarks.— Records good except those for extremely high stages and for periods of ice effect, which are fair. Discharge for periods of ice effect, Jan. 23 to Feb. 4, Feb. 19-23, determined from gage heights, weather records, and by comparison with records for stations upstream. Discharge for high stages determined from graphs based on twice-daily gage readings. Regulation from storage in Milton and Pymatuning Reservoirs and from power operations upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	367	357	830	785	440	5,830	4,750	2,720	454	486	325	1,240
2	406	336	740	785	425	4,410	4,920	2,450	454	454	297	1,025
3	377	326	615	1,560	440	3,760	4,750	2,720	425	1,000	289	834
4	367	326	538	2,860	500	3,760	4,090	2,190	386	976	293	706
5	357	362	435	4,080	785	4,580	3,760	1,820	386	666	396	554
6	308	406	435	3,600	830	3,450	5,460	1,580	396	486	454	454
7	245	377	486	2,860	830	2,580	7,000	1,460	396	454	425	425
8	277	406	911	2,580	740	2,390	5,100	1,240	454	386	396	396
9	286	435	4,100	4,940	575	5,680	4,410	976	519	370	344	391
10	286	435	4,750	9,630	501	7,390	4,750	927	519	354	289	365
11	326	435	3,300	7,400	435	7,740	5,280	834	880	344	306	344
12	317	524	2,580	5,280	377	8,950	4,750	747	554	344	316	344
13	308	1,460	2,450	5,280	439	8,420	4,750	747	519	320	297	486
14	349	1,300	2,580	4,580	969	5,670	4,080	927	454	297	306	519
15	649	1,180	5,550	3,920	1,820	5,780	3,300	976	375	297	320	486
16	406	785	8,200	3,300	2,320	7,550	3,000	976	375	293	354	486
17	357	655	7,200	2,860	1,920	8,810	2,580	834	396	306	365	519
18	326	575	5,280	2,580	1,580	5,350	2,190	790	425	339	320	590
19	322	538	3,920	2,720	1,400	4,230	2,060	1,020	425	344	339	519
20	299	501	3,150	2,190	1,100	4,680	1,940	1,020	375	316	454	454
21	281	468	2,580	1,820	900	4,800	1,940	834	344	280	454	396
22	377	435	2,060	1,460	750	4,800	2,450	666	335	276	454	365
23	538	435	1,580	1,200	700	8,620	2,450	590	306	316	486	335
24	501	435	1,350	900	1,460	24,700	2,190	519	302	795	590	454
25	501	377	1,240	750	5,830	40,100	1,760	782	297	486	554	666
26	406	406	1,080	660	13,700	33,200	1,460	554	306	454	747	554
27	372	406	925	600	20,200	22,300	1,350	519	302	391	834	454
28	322	615	830	550	16,800	12,400	1,240	590	302	386	747	454
29	406	975	830	500	13,300	7,860	1,460	519	293	519	1,360	519
30	406	975	830	470		5,960	2,360	519	454	454	1,580	454
31	377		830	450		5,130		519	354	1,700		
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October.....					649	245	368	0.165		0.19		
November.....					1,460	326	575	.257		.29		
December.....					8,200	435	2,329	1.04		1.20		
January.....					9,630	450	2,682	1.20		1.39		
February.....					20,200	377	3,171	1.42		1.53		
March.....					40,100	2,390	8,996	4.03		4.65		
April.....					7,000	1,240	3,402	1.52		1.70		
May.....					2,720	519	1,083	.485		.56		
June.....					880	293	414	.185		.21		
July.....					1,000	276	437	.196		.23		
August.....					1,700	289	529	.237		.27		
September.....					1,240	335	526	.235		.26		
The year.....					40,100	245	2,045	.915		12.47		

BEAVER RIVER BASIN

Pymatuning Reservoir at Pymatuning Dam, Pa.

Location.- Water-stage recorder, lat. 41°30'0" long. 80°27'35", in gate house at Pymatuning Dam, Crawford County, 1 3/4 miles northwest of Jamestown. Zero of gage is at mean sea level.

Drainage area.- 158 square miles.

Records available.- October 1933 to September 1936.

Extremes.- Maximum water-surface elevation during year, 1,008.93 feet Mar. 31;

minimum, 1,002.73 feet Nov. 5.

1933-36: Maximum water-surface elevation, that of Mar. 31, 1936; minimum,

975.70 feet Oct. 15, 16, 19, 1933.

Remarks.- Records excellent. Reservoir used to regulate flow in Shenango River.

Elevation of spillway is 1,008.0 feet. Total capacity of reservoir is 8,640,000,000 cubic feet.

Elevation, in feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.35	3.05	3.01	3.88	4.79	6.00	8.74	7.73	7.59	7.03	6.31	5.87
2	3.27	3.04	3.04	3.91	4.81	6.04	8.67	7.76	7.55	7.00	6.29	5.83
3	3.23	2.97	3.00	3.94	4.82	6.07	8.70	7.89	7.64	7.00	6.24	5.85
4	3.26	2.90	3.09	4.00	4.85	6.13	8.57	7.87	7.59	6.96	6.28	5.83
5	3.27	2.92	3.02	4.08	4.86	6.19	8.49	7.85	7.56	6.98	6.30	5.76
6	3.29	2.96	3.03	4.13	4.86	6.23	8.59	7.80	7.50	6.95	6.33	5.70
7	3.24	2.96	3.01	4.15	4.88	6.24	8.55	7.79	7.48	6.91	6.31	5.68
8	3.22	2.96	3.04	4.17	4.88	6.26	8.49	7.78	7.50	6.96	6.26	5.69
9	3.18	2.94	3.14	4.23	4.87	6.40	8.44	7.77	7.47	6.84	6.22	5.68
10	3.15	2.90	3.18	4.37	4.88	6.48	8.44	7.75	7.44	6.83	6.22	5.66
11	3.21	2.98	3.25	4.42	4.87	6.57	8.39	7.73	7.48	6.78	6.20	5.60
12	3.18	3.06	3.23	4.46	4.88	6.72	8.40	7.72	7.46	6.78	6.14	5.59
13	3.14	3.10	3.28	4.50	4.90	6.79	8.38	7.84	7.42	6.75	6.11	5.57
14	3.16	3.02	3.32	4.55	4.93	6.83	8.27	7.89	7.38	6.74	6.06	5.51
15	3.18	3.02	3.35	4.58	4.96	6.89	8.26	7.82	7.36	6.72	6.03	5.51
16	3.09	3.02	3.54	4.61	4.97	7.00	8.26	7.84	7.33	6.64	6.05	5.53
17	3.08	3.04	3.56	4.63	4.98	7.15	8.17	7.79	7.25	6.58	6.09	5.58
18	3.11	3.04	3.59	4.67	5.00	7.23	8.09	7.81	7.25	6.53	5.99	5.52
19	3.07	2.94	3.62	4.70	5.00	7.24	8.02	7.90	7.27	6.50	5.96	5.46
20	3.09	2.98	3.75	4.72	5.00	7.27	7.92	7.87	7.26	6.46	6.04	5.40
21	2.99	2.94	3.69	4.72	5.01	7.32	7.97	7.86	7.26	6.41	6.00	5.40
22	3.09	3.02	3.71	4.74	5.01	7.35	7.89	7.81	7.20	6.32	5.97	5.36
23	3.16	3.06	3.72	4.75	5.01	7.52	7.82	7.81	7.11	6.25	5.97	5.29
24	3.12	3.00	3.74	4.77	5.02	7.96	7.80	7.82	7.10	6.41	5.98	5.37
25	3.06	2.93	3.75	4.77	5.16	8.32	7.72	7.84	7.05	6.36	5.96	5.33
26	3.05	2.95	3.78	4.77	5.41	8.46	7.74	7.78	7.02	6.34	5.97	5.23
27	3.03	2.90	3.81	4.77	5.81	8.59	7.62	7.84	7.04	6.43	5.94	5.18
28	3.02	2.97	3.83	4.79	5.91	8.68	7.64	7.81	7.05	6.42	5.87	5.29
29	3.01	2.96	3.85	4.78	5.97	8.65	7.72	7.74	6.94	6.48	5.94	5.24
30	3.03	2.96	3.86	4.79		8.65	7.74	7.74	7.04	6.42	5.92	5.14
31	3.03		3.87	4.78		8.78		7.67		6.36	5.92	

Note.- Add 1,000.00 feet to obtain elevations above mean sea level.

BEAVER RIVER BASIN

Shenango River at Pymatuning Dam, Pa.

Location.- Water-stage recorder, lat. 41°29'55", long. 80°27'30", 500 feet below mouth of Sugar Run, 550 feet below Pymatuning Dam, Crawford County, and 1 1/2 miles northwest of Jamestown. Zero of gage is 970.00 feet above mean sea level.

Drainage area.- 167 square miles.

Records available.- June 1934 to September 1936.

Extremes.- Maximum discharge during year, 788 second-feet Apr. 1 (gage height, 6.80 feet); minimum, 2.0 second-feet Oct. 4, Feb. 11, 12 (gage height, 3.42 feet).

1934-36: Maximum discharge, that of Apr. 1, 1936; minimum, 0.4 second-foot July 2, 3, 1934 (gage height, 3.27 feet).

Remarks.- Records excellent. Regulation from storage in Pymatuning Reservoir. Corrections for storage not included except in part of monthly table. Figures with minus sign indicate amount by which evaporation and seepage from reservoir exceeded natural flow.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	80	49	3.5	4.6	3.0	7.7	723	167	71	122	122	127
2	61	49	3.4	4.6	2.9	6.6	686	163	77	122	122	124
3	25	49	3.3	23	3.0	8.3	697	163	116	60	122	124
4	16	49	23	33	3.5	17	646	163	116	78	124	124
5	57	49	44	29	4.6	14	674	157	109	77	124	124
6	80	49	44	12	5.5	8.0	708	157	78	77	91	127
7	80	49	24	8.6	3.8	6.1	638	153	78	91	62	124
8	70	34	10	7.7	3.0	8.1	638	153	78	122	98	124
9	51	2.9	38	49	2.8	156	674	153	78	122	122	124
10	44	3.0	12	42	2.4	28	697	153	78	122	122	124
11	55	3.6	11	15	2.2	41	663	153	78	122	122	122
12	80	5.3	8.6	12	2.2	57	686	110	78	122	122	122
13	80	5.8	7.3	20	2.3	17	663	5.9	111	122	122	122
14	80	5.5	11	13	3.2	14	610	7.4	146	119	122	122
15	63	4.3	52	9.8	4.3	34	610	4.7	140	202	122	122
16	44	3.8	56	8.9	5.2	25	608	3.9	124	216	122	122
17	60	3.5	18	6.9	4.1	9.7	584	3.4	102	209	122	127
18	82	3.4	12	8.5	3.4	6.1	569	3.2	84	170	122	124
19	82	18	11	6.7	3.4	8.1	557	6.1	84	130	102	105
20	82	38	8.0	5.7	3.2	10	553	4.2	84	134	95	64
21	66	38	6.7	4.5	2.6	10	561	3.5	84	140	119	136
22	25	38	6.4	4.3	2.5	14	561	3.0	90	140	127	263
23	3.1	20	6.0	3.9	2.4	64	442	2.9	109	140	130	268
24	3.3	2.5	5.7	3.8	49	422	309	2.5	122	140	137	181
25	49	2.4	5.5	3.4	186	186	309	42	122	134	140	130
26	86	43	5.2	3.3	108	153	305	71	122	134	114	127
27	86	67	5.2	3.1	116	219	236	73	122	122	127	127
28	70	45	5.2	3.0	15	368	167	71	122	70	127	127
29	49	28	5.0	3.0	10	674	185	71	122	68	158	127
30	50	4.2	5.0	3.1		674	171	71	124	86	130	127
31	51		4.8	3.3		728		71		124	127	
Month		Observed			Storage		Corrected for storage					
		Maximum	Minimum	Mean	(Mean)	Mean	Per square mile	Run-off in inches				
October		86	3.1	58.4	-60.9	-2.5	-0.15	-0.02				
November		67	2.4	25.4	0	25.4	1.52	1.18				
December		56	3.3	14.9	+185	200	1.20	1.38				
January		49	3.0	11.6	+190	202	1.21	1.40				
February		186	2.2	19.3	+280	299	1.79	1.93				
March		728	6.1	129	+649	778	4.66	5.37				
April		723	167	538	-270	268	1.60	1.78				
May		167	2.5	76.3	0	76.3	.457	.53				
June		146	71	102	-167	-65.0	-.389	-.43				
July		216	60	124	-136	-12.0	-.072	-.08				
August		158	62	120	-111	9.0	.054	.06				
September		268	64	134	-181	-47.0	-.281	-.31				
The year		728	2.2	112	+ 32.1	144	.862	11.79				

BEAVER RIVER BASIN

Shenango River at Sharon, Pa.

Location.— Water-stage recorder, lat. 41°13'55", long. 80°30'35", at Chestnut Street Bridge, at Sharon, Mercer County, 500 feet above mouth of Pine Run. Zero of gage is 840.00 feet above mean sea level.

Drainage area.— 808 square miles.

Records available.— October 1918 to September 1921, October 1931 to September 1936 in reports of U. S. Geological Survey; August 1909 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.— 26 years (1910-36), 683 second-feet.

Extremes.— Maximum discharge during year, 11,900 second-feet Mar. 25 (gage height, 13.40 feet, from floodmark in gage well); minimum, 40 second-feet Oct. 6 (gage height, 2.36 feet).

1909-36: Maximum discharge, 25,200 second-feet Mar. 26, 1913 (gage height, 18.1 feet) from rating curve extended above 14,000 second-feet; minimum, 6.5 second-feet Sept. 22, 1932 (gage height, 1.63 feet).

Remarks.— Records fair. Discharge for periods of ice effect, Jan. 21 to Feb. 4, Feb. 20-27, determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations at Pymatuning Dam and at Wampum. Regulation from storage in Pymatuning Reservoir and from power operations upstream. Corrections for effect of storage not included in records except in part of monthly table. Figures with minus sign indicate amount by which evaporation and seepage from reservoir exceeded natural flow.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	68	91	174	174	90	1,620	1,770	1,050	134	236	154	428
2	108	84	126	170	85	1,140	1,730	800	123	211	151	328
3	108	86	111	462	85	860	1,660	640	120	388	155	274
4	82	76	89	1,080	90	860	1,560	595	154	288	161	236
5	56	86	74	1,420	115	992	1,310	585	164	174	151	204
6	43	93	106	1,120	148	857	2,130	555	161	167	194	180
7	78	97	131	800	142	590	2,210	444	128	134	167	174
8	95	104	328	680	126	424	1,700	380	126	120	111	164
9	93	104	1,280	1,340	99	1,980	1,700	348	218	145	111	154
10	84	86	1,150	2,460	97	3,000	2,290	324	296	145	154	151
11	72	68	890	1,730	97	2,370	2,130	306	190	145	148	145
12	68	88	722	1,240	91	2,730	2,050	296	194	137	140	148
13	86	205	570	1,210	88	2,050	2,050	302	158	134	140	167
14	108	246	635	1,210	116	1,340	1,660	396	151	128	131	158
15	106	170	1,310	890	194	1,480	1,450	452	198	128	134	208
16	99	126	2,460	740	218	1,520	1,210	388	184	170	151	181
17	72	93	1,730	550	194	1,180	1,080	232	170	222	148	296
18	62	86	1,240	460	170	900	952	167	164	222	137	229
19	89	86	1,050	460	148	758	920	246	131	187	145	198
20	102	73	830	299	128	800	890	257	142	128	246	170
21	104	80	444	350	120	860	920	204	126	128	194	111
22	126	111	336	270	115	860	1,080	142	108	137	260	119
23	137	102	388	200	110	1,920	1,050	111	106	146	324	292
24	109	97	340	170	142	6,500	782	102	120	194	257	332
25	72	78	292	160	800	10,800	615	99	145	184	254	292
26	58	58	243	150	3,000	8,680	570	84	145	164	452	198
27	102	66	218	140	5,000	4,270	535	167	145	170	392	180
28	126	175	218	130	4,720	3,000	460	184	142	340	334	177
29	126	257	187	120	2,680	2,130	1,080	170	145	226	625	177
30	103	250	190	110		1,890	1,210	151	194	151	850	174
31	89		177	100		1,930		148		123	570	
Month	Observed			Storage		Corrected for storage						
	Maximum	Minimum	Mean	(Mean)	(Mean)	Mean	Per square mile	Run-off in inches				
October	137	43	91.3	-60.9	30.4	0.050	0.06					
November	257	58	114	0	114	.188	.21					
December	2,460	74	582	+185	767	1.26	1.45					
January	2,460	100	658	+190	848	1.39	1.60					
February	5,000	85	662	+280	942	1.55	1.67					
March	10,800	424	2,264	+649	2,913	4.79	5.52					
April	2,290	460	1,558	-270	1,088	1.79	2.00					
May	1,050	84	333	0	333	.548	.63					
June	296	106	156	-167	11	.018	.02					
July	388	120	180	-136	44	.072	.08					
August	830	111	243	-111	132	.217	.25					
September	428	111	208	-181	27	.044	.05					
The year	10,800	43	572	+ 32.1	604	.993	13.52					

BEAVER RIVER BASIN

Sugar Run at Pymatuning Dam, Pa.

Location.— Staff gage, lat. 41°29'50", long. 80°27'55", at highway bridge at Pymatuning Dam, Crawford County, a quarter of a mile above mouth, and 1 3/4 miles northwest of Jamestown. Zero of gage is 984.59 feet above mean sea level.

Drainage area.— 9.34 square miles.

Records available.— March 1934 to September 1936.

Extremes.— Maximum discharge during year, 678 second-feet Mar. 24 (gage height, 4.0 feet, from graph based on gage readings) from rating curve extended above 200 second-feet; no flow at times during January and July.

1934-36: Maximum discharge, that of Mar. 24, 1936; no flow at times during each year.

Remarks.— Records fair. Discharge for periods of ice effect, Dec. 22 to Jan. 4, Jan. 21-24, Feb. 4 to Mar. 5, determined from gage heights, weather records, and by comparison with records for station on Shenango River at Pymatuning Dam. Discharge for high stages determined from graphs based on twice-daily gage readings.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.3	0.5	1.2	0.9	1.2	5.9	12	8.2	0.5	0.8	0.2	1.0
2	.4	.5	1.1	2.0	.2	4.4	17	6.2	.4	.5	.2	.8
3	.4	.4	1.1	24	.3	5.6	9.9	7.0	.4	1.0	.1	.7
4	.4	.4	.8	24	1.0	17	7.6	5.5	.4	1.1	.2	.5
5	.4	.5	.8	37	3.0	13	7.3	3.0	.4	.8	.2	.4
6	.4	1.2	.8	11	2.5	6.2	64	2.3	.4	.5	.8	.4
7	.3	.8	1.2	6.7	2.0	2.8	17	1.8	.3	.4	.5	.2
8	.3	.6	12	5.5	1.0	16	14	1.6	.4	.2	.3	.2
9	.3	.6	41	48	.9	160	21	1.4	.4	.2	.2	.2
10	.3	.7	9.9	41	.6	28	50	1.2	.5	.2	.2	.2
11	.4	1.0	9.3	12	.5	40	21	1.1	.8	.1	.1	.2
12	.4	1.3	7.0	11	.5	56	54	1.1	.6	.1	.1	.2
13	.4	2.4	5.7	18	.6	15	19	1.5	.4	.1	.1	.2
14	.4	2.0	9.6	9.6	2.1	10	9.9	4.5	.4	.1	.1	.2
15	.3	1.3	51	9.7	3.0	32	8.2	1.7	.3	0	.1	.3
16	.3	1.1	55	7.0	3.5	21	6.0	1.2	.2	0	.1	.4
17	.3	.9	18	3.2	1.5	4.5	5.0	1.1	.2	0	.1	.7
18	.3	.8	13	7.3	1.2	3.4	4.5	1.1	.5	0	.1	.5
19	.4	.8	9.9	4.1	1.1	6.7	4.3	2.4	.8	0	.3	.3
20	.4	1.0	6.2	2.8	.9	8.2	3.4	1.5	.5	0	1.0	.3
21	.4	1.1	4.7	2.1	.8	8.4	5.2	1.1	.3	0	.5	.2
22	.5	.9	4.0	1.5	.7	11	7.6	.8	.2	0	.4	.2
23	.8	.8	3.5	.9	.7	60	5.5	.8	.2	0	.6	.2
24	.8	.7	3.0	.4	50	420	3.6	.7	.2	.2	.7	1.1
25	.7	.7	2.5	.3	180	143	2.8	.6	.2	.2	1.0	1.2
26	.5	.7	2.0	.3	105	36	2.2	.6	.2	.2	3.2	.6
27	.5	.8	1.7	.0	115	56	1.8	1.3	.2	4.1	.9	.4
28	.4	1.8	1.4	.0	14	22	5.0	.8	.2	1.3	.8	.6
29	.5	2.4	1.1	.5	8.6	13	24	.6	.2	.6	38	.5
30	.5	1.6	1.1	1.0		12	13	.6	2.8	.4	4.8	.5
31	.5		.9	1.8		29		.5		.2	1.5	
Month		Maximum	Minimum	Mean	Per square mile	Run-off in inches						
October		0.8	0.3	0.43	0.046	0.05						
November		2.4	.4	1.01	.108	.12						
December		55	.8	9.05	.969	1.12						
January		48	0	9.44	1.01	1.16						
February		180	.2	17.3	1.85	2.00						
March		420	2.8	40.8	4.37	5.04						
April		64	1.8	14.2	1.52	1.70						
May		8.2	.5	2.06	.221	.25						
June		2.8	.2	.45	.048	.05						
July		4.1	0	.43	.046	.05						
August		38	.1	1.95	.198	.23						
September		1.2	.2	.45	.048	.05						
The year		420	0	8.12	.869	11.82						

Little Shenango River at Greenville, Pa.

Location.- Water-stage recorder, lat. 41°25'15", long. 80°22'35", 1,500 feet below Williamson Crossing Bridge, 1 mile northeast of Greenville, Mercer County, and 2 miles above mouth. Zero of gage is 953.46 feet above mean sea level.

Drainage area.- 104 square miles.

Drainage area.- 104 square miles.
Records available.- November 1919 to September 1921, October 1931 to September 1936
in reports of U. S. Geological Survey; January 1914 to August 1923, November 1925
to September 1936 in reports of Pennsylvania Department of Forests and Waters.
Records prior to June 1934 obtained at Columbia Avenue Bridge 1 mile downstream.

Records prior to June 1934 obtained at Columbia Avenue Bridge 1 mile downstream.
Average discharge - 16 years (1914-18, 1920-22, 1926-36), 134 second-feet.

Extremes.- Maximum discharge during year, 4,440 second-foot Mar. 25 (gage height, 10.81 feet) from rating curve extended above 2,200 second-feet; minimum, 5.5 second-feet Oct. 4 (gage height, 0.71 foot); minimum daily discharge, 7.4 second-foot Oct. 11, July 21. Maximum discharge that of Mar. 25, 1936: minimum, 2.0

1919-23, 1925-36: Maximum discharge, that of Mar. 25, 1936; minimum, 2.0 second-feet Aug. 21, 1923.

Remarks.—Records good except those for extremely high stages and for periods of recorder failure, which are fair, and those for periods of ice effect, which are poor. Discharge for periods of ice effect, Dec. 2-7, Dec. 22 to Jan. 4, Jan. 20 to Feb. 28, determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations in adjacent drainage areas. Discharge for periods of recorder failure, Mar. 28 to Apr. 1, Aug. 9-12, 22-24, 26, 27, Sept. 2, determined by comparison with records for stations mentioned above. Some regulation at low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	12	27	47	24	183	210	187	23	38	18	40
2	9.8	11	22	52	23	141	239	128	22	25	13	34
3	8.7	10	20	200	22	134	219	115	19	38	11	30
4	8.0	12	18	400	25	200	160	102	18	28	13	22
5	12	12	18	447	43	281	141	80	18	25	17	20
6	8.7	17	17	231	45	157	472	72	17	22	31	16
7	8.0	18	19	135	40	109	408	59	17	18	33	14
8	8.7	17	55	103	33	100	225	51	30	15	24	14
9	8.3	18	268	309	28	988	248	45	257	12	35	13
10	8.0	15	176	698	25	790	488	42	54	16	25	12
11	7.4	18	120	337	22	509	348	38	59	13	20	11
12	9.8	29	103	203	20	720	376	38	43	11	15	11
13	8.7	35	85	238	22	400	338	59	32	10	11	13
14	8.3	39	107	225	26	221	200	78	25	9.4	11	12
15	7.7	27	274	160	60	362	157	52	23	8.7	12	12
16	9.8	26	646	135	54	348	129	42	21	8.3	15	12
17	8.7	20	335	96	48	197	112	37	18	11	11	36
18	7.7	18	187	102	45	105	103	35	21	9.0	13	44
19	8.3	19	144	89	40	167	100	79	32	8.3	14	25
20	9.4	21	108	49	36	219	94	75	22	8.0	45	17
21	8.3	18	80	51	34	233	98	46	16	7.4	25	12
22	9.4	19	70	46	33	220	149	37	14	7.7	37	14
23	24	16	65	42	32	472	126	32	14	8.6	29	12
24	25	13	62	38	90	2,460	98	30	14	24	25	17
25	21	12	59	35	800	3,100	79	28	13	22	28	28
26	14	13	56	33	1,300	1,380	70	26	12	15	70	23
27	12	14	54	31	1,700	840	61	34	12	146	40	16
28	11	22	52	29	700	666	72	34	12	108	31	16
29	11	42	50	27	309	450	382	27	12	43	150	16
30	16	34	48	26		350	256	26	50	27	114	16
31	14		47	25		250		24		23	342	
Month					Maximum		Minimum		Mean		Per square mile	Run-off in inches
October.....					25		7.4		11.0		0.106	0.12
November.....					42		10		19.9		.191	.21
December.....					646		17		109		1.05	1.21
January.....					698		25		150		1.44	1.66
February.....					1,700		20		196		1.88	2.03
March.....					3,100		100		540		5.19	5.98
April.....					488		61		205		1.97	2.20
May.....					187		24		56.7		.545	.63
June.....					257		12		31.3		.301	.34
July.....					146		7.4		24.7		.238	.27
August.....					342		11		41.4		.398	.46
September.....					44		11		19.3		.186	.21
The year.....					3,100		7.4		117		1.12	15.32

Pymatuning Creek near Orangeville, Pa.

Location.- Water-stage recorder, lat. 41°18'40", long. 80°28'40", 2 miles above mouth, 3 miles southeast of Orangeville, Mercer County, and 3 miles north of Sharpsville. Zero of gage is 872.94 feet above mean sea level.

Drainage area.- 169 square miles.

Records available.- October 1918 to September 1921, October 1931 to September 1936 in reports of U. S. Geological Survey; January 1914 to August 1923, November 1925 to September 1936 in reports of Pennsylvania Department of Forests and Waters. Records prior to June 1934 obtained at a site 1,500 feet downstream.

Average discharge.- 18 years (1914-22, 1926-36), 202 second-feet.

Average discharge.- 18 years (1914-22, 1926-36), 202 second-feet.
Extremes.- Maximum discharge during year, 3,250 second-feet Mar. 25 (gage height, 10.88 feet) from rating curve extended above 2,200 second-feet; minimum, 2.0 second-feet July 21, 22 (gage height, 1.09 feet).

1914-23, 1925-36: Maximum discharge, that of Mar. 25, 1936; minimum, 0.5 second-foot Sept. 25, 1933.

Maximum stage known, about 15.8 feet, former site and datum, Mar. 26, 1913 (probably affected by backwater from Shenango River, discharge not determined).

Remarks.— Records good except those for extremely high stages and for periods of ice effect, which are poor. Discharge for periods of ice effect, Dec. 4-7, 23, 24, Jan. 20 to Feb. 28, determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations in adjacent drainage areas. Some regulation from operation of mills upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.6	13	53	85	39	1,340	392	320	12	15	15	162
2	9.0	12	44	87	36	920	423	214	10	21	9.4	100
3	9.0	12	36	211	34	643	434	140	10	100	6.4	71
4	9.3	12	32	384	40	426	392	160	8.6	82	6.6	51
5	8.6	13	28	514	70	335	258	192	8.2	60	6.4	33
6	7.9	16	26	489	70	272	379	177	7.9	36	22	21
7	7.9	16	28	489	58	236	445	104	7.9	20	12	15
8	7.9	21	80	456	45	177	489	70	8.2	13	12	12
9	7.6	20	313	637	40	600	485	53	9.0	9.6	17	9.2
10	7.6	20	330	644	36	934	560	41	9.7	7.3	17	7.9
11	7.6	23	340	582	34	1,060	512	33	15	6.5	12	7.3
12	7.9	39	262	570	32	1,080	556	30	14	5.9	7.6	7.0
13	7.9	73	197	548	36	905	500	77	12	4.7	5.9	8.2
14	7.9	66	196	478	45	676	467	228	9.3	4.2	4.9	7.4
15	7.6	53	415	381	90	600	356	281	7.9	3.8	4.9	9.9
16	6.8	42	585	291	75	531	213	216	7.3	3.4	5.8	10
17	6.5	34	540	194	65	489	137	101	6.8	2.8	8.8	17
18	7.0	28	558	150	58	402	110	60	8.2	2.6	5.4	11
19	9.3	25	489	146	52	263	94	59	12	2.4	15	9.7
20	9.3	24	376	135	48	191	84	61	14	2.1	42	10
21	9.3	24	192	120	45	185	91	54	12.	2.0	42	9.3
22	14	25	237	110	43	197	114	39	8.3	2.0	85	8.2
23	24	23	210	95	41	413	118	28	6.8	2.6	62	7.0
24	20	21	180	85	100	1,810	103	23	5.9	12	60	11
25	20	20	157	77	600	3,130	84	21	6.5	7.0	96	15
26	18	18	144	70	1,000	2,490	70	17	5.6	6.5	133	14
27	16	19	126	63	2,200	1,760	58	22	5.1	7.4	132	15
28	15	39	106	56	2,100	1,180	69	20	4.9	16	90	17
29	14	54	94	50	1,880	778	222	18	5.5	28	193	15
30	14	60	93	45		577	330	16	12	30	227	13
31	13		88	42		478		14		24	227	
Month					Maximum	Minimum	Mean	Per square mile	Run-off in inches			
October.....					24	6.5	10.9	0.064	0.07			
November.....					73	12	28.8	1.170	.19			
December.....					585	26	211	1.25	1.44			
January.....					644	42	267	1.58	1.82			
February.....					2,200	32	311	1.84	1.98			
March.....					3,130	177	809	4.79	5.52			
April.....					560	58	285	1.69	1.89			
May.....					320	14	93.2	.551	.64			
June.....					15	4.9	9.02	.053	.06			
July.....					100	2.0	17.4	.103	.12			
August.....					227	4.9	51.1	.302	.35			
September.....					162	7.0	23.5	.139	.16			
The year.....					3,130	2.0	177	1.05	14.24			

BEAVER RIVER BASIN

Connoquenessing Creek at Hazen, Pa.

Location.- Chain gage, lat. 40°49'0", long. 80°14'35", at highway bridge at Hazen, Beaver County, half a mile above mouth of Brush Creek. Zero of gage is 852.31 feet above mean sea level.

Drainage area.- 356 square miles.

Records available.- October 1919 to September 1921, October 1931 to September 1936 in reports of U. S. Geological Survey; June 1915 to September 1936 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 17 years (1919-36), 478 second-feet.

Extremes.- Maximum discharge during year, 9,560 second-feet Mar. 17 (gage height, 12.45 feet, from floodmarks) from rating curve extended above 4,000 second-feet; minimum, 6.0 second-feet July 21-23 (gage height, 0.82 foot).

1915-36: Maximum gage height, 16.66 feet June 29, 1924 (discharge not determined); minimum discharge, that of July 21-23, 1936.

Remarks.- Records fair except those for periods of ice effect, Dec. 5-7, Dec. 21 to Jan. 7, Jan. 21 to Feb. 26, which are poor and were determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily gage readings. Some regulation from operation of mills upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	68	49	193	360	290	1,160	880	152	83	45	11	37
2	182	48	181	380	280	950	2,480	154	75	43	11	29
3	120	44	159	470	280	1,160	1,730	398	62	31	10	24
4	107	45	162	700	320	1,510	1,300	270	54	26	9.5	23
5	80	46	155	1,150	300	1,580	1,090	212	46	23	13	20
6	66	109	165	950	280	1,510	1,440	187	43	20	28	16
7	55	113	230	820	230	1,060	1,230	168	41	16	68	11
8	57	105	532	845	200	856	1,090	152	38	14	40	10
9	53	103	1,900	1,690	180	756	950	112	62	13	27	10
10	53	109	1,580	2,770	170	716	915	124	103	13	19	9.0
11	50	107	1,370	1,890	170	996	845	113	126	13	12	8.5
12	48	126	1,370	1,370	165	1,650	810	107	170	13	11	9.0
13	49	574	1,370	1,300	250	1,340	740	128	126	12	11	98
14	48	845	1,440	1,230	350	1,120	600	162	94	13	10	117
15	45	565	2,210	1,020	550	1,290	600	149	57	19	9.0	43
16	49	371	2,930	880	450	2,740	530	132	45	11	10	25
17	52	265	2,050	775	320	7,570	496	105	41	13	10	19
18	48	226	1,440	670	290	8,000	432	111	46	15	8.0	16
19	48	184	1,020	740	260	3,860	348	394	57	11	8.0	17
20	57	173	845	530	250	2,780	296	306	62	8.5	69	14
21	54	162	625	580	240	3,640	287	200	43	6.5	55	10
22	86	147	480	510	230	3,020	311	157	33	6.5	34	9.5
23	105	120	410	470	240	2,930	257	135	28	6.5	27	9.0
24	87	101	370	430	400	4,160	226	135	25	24	21	10
25	72	96	350	400	1,000	3,920	196	178	23	98	26	11
26	61	92	340	370	3,000	2,310	181	144	22	43	61	11
27	55	103	335	350	6,040	2,010	157	144	20	23	43	14
28	54	187	330	330	2,700	1,900	162	135	20	17	62	14
29	53	257	330	320	1,580	1,680	170	107	19	14	126	74
30	53	196	335	310		1,340	170	100	22	13	88	463
31	53		340	300		1,150	87			13	55	
Month	Maximum		Minimum		Mean		Per square mile		Run-off in inches			
October	182		45		66.7		0.187		0.22			
November	845		44		189		.531		.59			
December	2,930		155		824		2.31		2.66			
January	2,770		300		804		2.26		2.61			
February	6,040		165		725		2.04		2.20			
March	8,000		716		2,279		6.40		7.38			
April	2,480		157		697		1.96		2.19			
May	398		87		166		.466		.54			
June	170		19		56.2		.158		.18			
July	.98		6.5		20.5		.058		.07			
August	126		8.0		32.0		.090		.10			
September	463		8.5		39.4		.111		.12			
The year	8,000		6.5		493		1.38		18.86			

BEAVER RIVER BASIN

Slippery Rock Creek at Wurttemberg, Pa.

Location.- Chain gage, lat. 40°51'40", long. 80°14'35", at highway bridge at Wurttemberg, Lawrence County, 1 mile above mouth. Zero of gage is 812.48 feet above mean sea level.

Drainage area.- 406 square miles.

Records available.- October 1918 to September 1920, October 1931 to September 1936 in reports of U. S. Geological Survey; January 1912 to September 1936 in reports of Pennsylvania Department of Forests and Waters. Records prior to October 1922 obtained at a site half a mile upstream.

Average discharge.- 23 years (1912-36), 545 second-feet.

Extremes.- Maximum discharge during year, 7,100 second-feet Mar. 25 (gage height, 9.04 feet, from floodmarks) from rating curve extended above 3,000 second-feet; minimum, 25 second-feet July 23, Aug. 3 (gage height, 2.18 feet).

1912-36: Maximum gage height (estimated), 11.8 feet Dec. 14, 1927 (discharge not determined); minimum discharge, 11 second-feet Sept. 8, 1925; minimum daily discharge, 16 second-feet Sept. 8, 1925.

Remarks.- Records fair except those for periods of ice effect, Dec. 21 to Jan. 4, Jan. 21 to Feb. 25, which are poor and were determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily gage readings. Regulation from power operations upstream.

Daily and monthly discharge, in second-feet, 1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	72	81	283	385	300	1,620	940	270	136	92	44	99
2	104	81	240	450	300	1,220	1,350	429	114	97	41	72
3	114	81	216	700	290	1,020	1,530	1,440	109	122	30	72
4	109	85	166	1,000	300	1,100	1,100	1,100	95	184	36	65
5	85	95	200	1,440	370	1,820	902	650	97	112	38	57
6	67	122	412	1,260	330	1,530	1,180	512	95	78	65	52
7	59	157	755	980	310	1,060	1,260	366	92	63	98	48
8	59	114	828	790	290	782	902	313	109	65	80	34
9	57	95	2,130	1,440	250	843	790	283	87	57	36	31
10	63	133	1,720	2,810	240	1,150	828	216	90	54	48	46
11	63	160	1,260	2,020	230	1,390	865	190	90	48	34	39
12	72	239	902	1,440	230	2,160	865	200	99	39	39	36
13	67	1,060	828	1,620	270	1,720	755	204	99	36	36	65
14	83	940	1,020	1,350	350	1,280	615	288	83	34	33	54
15	139	580	1,720	1,020	450	1,500	512	248	72	33	31	46
16	131	344	2,460	720	400	2,130	512	186	65	33	44	61
17	104	265	1,540	499	330	3,430	512	166	61	30	48	41
18	81	231	1,350	333	310	3,460	424	223	70	28	34	34
19	81	216	1,100	388	290	3,150	377	685	97	34	33	44
20	76	186	902	454	280	2,470	344	790	83	31	57	39
21	76	176	780	430	280	2,110	377	418	67	31	52	36
22	87	154	600	400	270	1,870	486	257	63	31	48	33
23	160	148	500	390	280	2,310	442	208	52	25	46	31
24	239	133	420	370	400	5,180	355	204	46	175	71	34
25	154	125	390	360	1,500	6,690	279	442	44	104	102	34
26	133	107	370	350	4,240	4,260	257	366	55	83	183	42
27	120	109	360	340	4,800	2,820	243	308	48	54	107	42
28	104	216	355	330	3,170	2,210	220	208	52	56	102	38
29	99	454	350	320	2,020	1,500	261	186	46	106	204	61
30	95	328	355	310		1,250	265	169	63	65	268	70
31	95		360	310		1,090		145		50	168	
Month					Maximum	Minimum	Mean	Per square mile	Run-off in inches			
October					239	57	98.3	0.242	0.28			
November					1,060	81	240	.591	.66			
December					2,460	166	802	1.98	2.28			
January					2,810	310	807	1.99	2.29			
February					4,800	230	796	1.96	2.11			
March					6,690	782	2,133	5.25	6.05			
April					1,530	220	658	1.62	1.81			
May					1,440	145	376	.926	1.07			
June					136	44	79.3	.195	.22			
July					184	25	66.1	.163	.19			
August					263	30	72.8	.179	.21			
September					99	31	48.5	.119	.13			
The year					6,690	25	516	1.27	17.30			

Miscellaneous Discharge Measurements for the year ending Sept. 30, 1936.

Stream	Location	Date	Gage height	Discharge	Drainage area	Per square mile
Delaware River Basin						
Monocacy Creek.....	New Street Bridge at Bethlehem.....	Dec. 12	.....	130	49.6	2.62
do.....	do.....	Mar. 12	.....	1,040	49.6	21.0
do.....	do.....	Mar. 13	.....	400	49.6	8.06
do.....	do.....	May 14	.....	104	49.6	2.10
do.....	do.....	July 8	.....	62.9	49.6	1.27
do.....	do.....	Sept. 3	.....	120	49.6	2.42
Susquehanna River Basin						
West Branch of Susquehanna River.....	Near Westport.....	Mar. 18	.....	213,000 a	2,678	80
do.....	At Watertown.....	Mar. 18	.....	285,000 a	6,596	43
do.....	At Rockview Prison near Pleasant Gap.....	Mar. 17	.....	1,010 b	2.4	421
McBrides Gap Run.....	Pottsgrove Dam near Altoona.....	Mar. 18	.....	80,000	.....	278
Franktown Branch of Juniata River.....	Bellwood Dam near Bellwood.....	Mar. 17	.....	777 b	2.8	184
Kettle Creek.....	do.....	Mar. 17	.....	3,350 b	18.2	167
Belle Gap Run.....	Dam No. 2 near Tyrone.....	Mar. 17	.....	1,000 b	6.0	150
Sinking Run.....	Dam No. 1 near Tyrone.....	Mar. 17	.....	913 b	6.1	122
do.....	At Juniata Crossing.....	Mar. 18	.....	67,000 a	549	91
Raystown Branch of Juniata River.....	Raystown Dam at Harris Bridge.....	Nov. 21	.....	86,500 b	34.3	3.03
do.....	At highway bridge three-fourths mile southwest of Pine Grove.....	Jan. 17	.....	104	34.3	3.27
Upper Little Swatara Creek.....	do.....	Jan. 10	.....	509	34.3	14.8
do.....	do.....	May 12	.....	15.6	34.3	.45
do.....	do.....	July 10	.....	5.8	34.3	.17
do.....	do.....	Sept. 4	.....	3.7	34.3	.11
Ohio River Basin						
Big Mill Creek.....	Borough Dam at Ridgway.....	Mar. 17-18	.....	5,650 b	28.4	199
Redbank Creek.....	At Mayport.....	Mar. 17-18	.....	30,500 a	454	67
Stony Creek.....	At Ferndale.....	Mar. 17-18	.....	58,600 ac	451	130
Conemaugh River.....	Near New Florence.....	Mar. 18	.....	91,000 a	748	122
Little Conemaugh River.....	Near Mineral Point.....	Mar. 17-18	.....	22,400 a	160	140
do.....	At Conemaugh.....	Mar. 17-18	.....	28,800 a	187	154
North Branch of Little Conemaugh River.....	Wilmore Dam near Wilmore.....	Mar. 17	.....	5,824 b	24.5	228
South Fork of Little Conemaugh River.....	Lloydell Run Dam near Lloydell.....	Mar. 17	.....	521 b	6.3	123
Frout Run.....	Findley Run Dam near Gramer.....	Mar. 17-18	.....	251 b	10.5	83
Tub Mill Creek.....	Tub Mill Dam near New Florence.....	Mar. 17-18	.....	6,000 b	65.2	92
Yellow Creek.....	Lucerne Dam near Homer City.....	Mar. 17-18	.....	2,800 b	11.7	227
Cherry Run.....	Cherry Run Dam near Homer City.....	Mar. 17-18	.....	518 b	5.2	119
Trout Run.....	Trout Run Dam near Latrobe.....	Mar. 17-18	.....	818 b	1,065	144
Toughlogheny River.....	At Ohioville.....	June 2	.....	537	1,065	50
do.....	do.....	Aug. 11	.....	1.03	.....	.....
Casselman River.....	Near Rockwood.....	Mar. 17	.....	32,000 a	341	94
Indian Creek.....	Indian Creek Dam near Indian Creek.....	Mar. 17	.....	6,820 b	110	52
Chartiers Creek.....	At Main Street Bridge, Carnegie.....	Oct. 23	.....	45.5	264	17
do.....	do.....	Dec. 15	.....	1,010	264	3.83
do.....	do.....	Feb. 15	.....	1,440	264	5.45
do.....	do.....	Apr. 27	.....	195	264	.74
do.....	do.....	Apr. 28	.....	205	264	.79
do.....	do.....	June 5	.....	45.2	264	.10
do.....	do.....	Aug. 14	.....	25.8	264	.....
a- Slope-area determination						
b- Spillway determination						
c- Contracted-opening determination						

Summary of run-off in second-feet per square mile, run-off depth in inches, precipitation, and per cent run-off to precipitation, for the year ending Sept. 30, 1936

Delaware River Basin

Station	Drainage area Square miles	Run-off in second-feet per square mile										Run-off inches	Pre- cipitation inches	Per cent to precipitation
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Year
		Run-off	Run-off	Run-off	Run-off	Run-off	Run-off	Run-off	Run-off	Run-off	Run-off	Run-off	Run-off	Run-off
Delaware River at Port Jervis, N. Y.....	3,076	0.442	3.44	1.95	1.66	0.867	9.88	3.79	1.18	0.846	0.273	0.348	0.284	2.01
Delaware River at Belvidere, N. J.....	4,542	.452	3.17	2.00	1.96	.997	9.45	3.83	1.21	.946	.367	.407	.328	2.09
Delaware River at Riegelsville, N. J.....	6,244	.437	3.31	2.11	2.14	1.07	9.31	3.88	1.21	.985	.413	.432	.367	2.10
Delaware River at Trenton, N. J.....	6,796	.879	3.65	1.65	1.20	1.684	10.2	3.19	.973	.504	.269	.357	.226	2.15
Lackawanna River at West Hawley.....	206	.317	2.61	1.57	1.26	.851	11.3	2.02	1.63	.845	.269	.039	-.180	1.95
Wallenpaupack Creek at Wilsonville.....	228	.317	2.61	1.57	1.26	.851	11.3	2.02	1.63	.845	.269	.039	-.180	1.74
Eschkill Creek at Shoemakers.....	117.4	.596	3.54	2.71	2.78	1.32	8.75	3.90	1.63	.691	.425	.371	.153	2.38
Eschkill Creek at Stroudsburg.....	122	1.05	3.00	2.38	2.10	1.13	10.8	4.24	1.02	.913	.425	.407	.231	2.48
Lehigh River at Tanners.....	1,280	.610	3.89	2.34	2.59	1.31	9.31	3.84	1.20	.901	.558	.530	.402	2.15
Lehigh River at Bethlehem.....	97.4	1.26	3.89	2.34	2.59	1.31	9.31	3.84	1.20	.901	.558	.530	.402	2.04
Lehigh River at Pipersville.....	210	.408	3.89	1.15	3.82	1.28	5.46	3.40	1.24	.729	.394	.284	.113	1.94
Hessman Creek near Langhorne.....	1,147	.429	1.96	1.02	3.87	1.95	7.40	3.40	1.24	.929	.580	.524	.406	1.83
Schuylkill River at Pottstown.....	1,893	.479	2.01	1.49	3.33	1.50	7.16	3.45	1.15	.783	.395	.401	.253	1.98
Schuylkill River at Philadelphia.....	42.9	.667	2.00	1.93	2.17	1.43	8.95	3.45	1.15	.723	.429	.476	.137	1.95
Little Schuylkill River at Tamaqua.....	279.3	.516	3.09	1.40	3.36	2.75	7.86	2.40	1.37	.958	.640	.502	.562	1.79
Pottomac Creek at Graters Ford.....	33.3	1.05	2.03	1.35	3.76	2.90	4.32	2.83	1.34	.865	.586	.571	.420	1.85
Crum Creek at Woodlyn.....	21.9	.843	2.03	1.35	3.76	2.90	4.32	2.83	1.34	.865	.586	.571	.420	1.65
Ridley Creek at Moylan.....	81.1	.850	2.03	1.35	3.76	2.90	4.32	2.83	1.34	.865	.586	.571	.420	1.85
White Clay Creek near Newark, Del.....	87.8	.857	2.03	1.35	3.76	2.90	4.32	2.83	1.34	.865	.586	.571	.420	1.65
Brandywine Creek at Chadha Ford.....	287	.857	2.03	1.35	3.76	2.90	4.32	2.83	1.34	.865	.586	.571	.420	1.85

Summary of run-off in second-feet per square mile, run-off depth in inches, precipitation, and per cent run-off to precipitation, for the year ending Sept. 30, 1936

Susquehanna River Basin

Station	Drainage area Square miles	Run-off in second-feet per square mile												Run-off Depth in inches	Pre- cipitation Depth in inches	Per- cent run-off to precipitation	
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.				Year
No. Br. Susquehanna River at Towanda	7,797	0.244	2.30	1.40	0.851	0.528	7.80	2.70	0.932	0.296	0.110	0.208	1.39	1.47	19.98	37.82	52.8
No. Br. Susquehanna River at Wilkes-Barre.....	9,960	.220	2.26	1.33	.895	.525	8.09	2.63	.854	.327	.148	.214	.161	1.48	20.01	38.34	52.2
No. Br. Susquehanna River at Danville.....	11,220	.197	2.27	1.56	1.03	.536	8.19	2.70	.840	.362	.155	.210	.158	1.50	20.75	38.64	53.7
Susquehanna River at Harrisburg.....	24,100	.186	1.54	1.39	1.08	.702	8.97	2.82	.794	.442	.217	.235	.198	1.56	21.17	40.78	51.9
Susquehanna River at Marietta.....	25,990	.186	1.46	1.34	1.08	.690	8.81	2.81	.783	.441	.217	.238	.190	1.53	20.83	40.98	50.8
Towanda Creek near Monticello.....	214	.105	1.40	1.12	1.44	.603	9.43	1.52	.720	.235	.049	.108	.023	1.35	18.34	39.88	46.0
Tunkhannock Creek at Dixon.....	363	.415	3.99	1.50	1.69	.530	7.20	2.38	.405	.305	.086	.188	.074	1.55	21.16	46.12	45.9
Waywallopen Creek near Waywallopen.....	45.8	.206	1.90	1.98	1.69	1.03	7.14	2.34	.655	.289	.160	.116	.074	1.50	20.36	39.06	52.1
West Br. Susquehanna River at Bower	315	.167	.832	1.93	2.08	1.48	10.7	2.41	.438	.289	.160	.116	.074	1.50	20.36	39.06	52.1
West Br. Susquehanna River at Renovo	2,975	.144	.793	1.53	1.24	.646	11.5	2.80	.742	.484	.177	.320	.185	1.73	23.50	42.87	54.8
West Br. Susquehanna River at Williamsport.....	5,682	.169	.960	1.50	.936	.460	11.1	2.84	.763	.450	.199	.265	.204	1.67	22.69	42.37	53.6
Clearfield Creek at Dismeling.....	371	.112	.660	1.43	1.83	1.21	11.8	2.43	.429	.485	.185	.423	.223	1.78	24.22	46.98	51.6
Driftwood Branch Sinnemahoning Creek at Sterling Run.....	281	.206	1.02	1.56	.694	.601	13.8	2.60	.712	1.91	.072	.201	.047	1.83	24.83	39.60	62.7
North Bald Eagle Creek at Beech Creek Station.....	559	.252	.565	1.20	.692	.606	8.87	2.58	.723	.526	.351	.369	.283	1.43	19.43	41.50	46.8
Pine Creek at Cedar Run.....	804	.202	.922	1.975	.887	.536	10.5	2.98	.813	.328	.124	.432	.192	1.59	21.57	40.64	53.0
Lycoming Creek near Trout Run.....	173	.247	1.86	1.48	.792	.496	9.39	2.32	1.02	.351	.134	.194	.088	1.54	20.95	44.94	48.6
Loyalsock Creek at Loyalsock.....	443	.193	2.35	1.92	1.85	1.00	10.1	2.66	.993	.472	.202	.162	.089	1.84	21.76	42.19	51.6
Penn Creek at Penna Creek.....	301	.271	1.01	1.36	1.89	.724	10.3	2.82	.671	.435	.243	.190	.140	1.59	21.76	42.19	51.6
Mahanago Creek East near Dalmatia.	162	.170	.889	1.17	1.91	1.59	7.48	2.36	.501	.623	.244	.205	.118	1.44	19.64	41.52	47.3
Franktown Branch Juniata River at Williamsburg.....	291	.227	.502	.952	1.01	1.32	12.2	3.14	.584	.440	.312	.381	.293	1.79	24.36	47.07	51.8
Juniata River at Newport.....	3,354	.195	.639	.992	.936	1.25	10.3	2.77	.697	.530	.283	.295	.294	1.60	21.80	43.35	50.3
Shaver Creek near Petersburg.....	46.4	.102	.494	1.23	1.14	1.21	11.1	2.48	1.05	.716	.163	.196	.104	1.67	22.82	44.92	51.3
Standing Stone Creek near Huntingdon	128	.193	.429	1.04	.953	.922	8.15	2.91	1.20	1.24	.249	.246	.136	1.48	20.11	44.50	45.2
Raystown Branch Juniata River at Saxton.....	756	.183	.462	.915	.939	1.60	10.5	2.44	.893	.434	.266	.422	.258	1.58	21.56	44.15	48.8
Dunning Creek at Yount.....	191	.165	.644	1.23	1.12	2.06	10.0	2.54	.739	.296	.177	.434	.220	1.61	21.67	45.55	48.0
Brush Creek at Gapville.....	96.8	.130	.489	1.04	1.19	2.05	10.1	2.90	.549	.167	.137	.248	.098	1.59	21.67	43.63	52.1
Great Trough Creek near Marklesburg.	84.6	.117	.448	.994	.896	1.30	11.7	2.59	.439	.230	.169	.187	.079	1.60	21.86	42.13	51.8
Augsburg Creek near Orbisonia.....	174	.170	.556	1.15	1.16	1.69	10.2	2.62	.461	.335	.186	.249	.082	1.60	21.70	42.54	51.0
Tuscarora Creek near Port Royal.....	214	.272	1.29	1.33	1.36	1.76	11.0	2.90	.514	.397	.262	.163	.089	1.75	23.84	40.80	58.4
Coccolamus Creek near Millerstown.....	57.2	.278	1.78	1.43	1.55	1.23	8.48	2.99	.330	.255	.128	.126	.080	1.56	21.18	41.03	51.6
Sherman Creek at Shermandale.....	200	.660	1.90	1.78	1.78	2.16	9.36	3.30	.680	.383	.210	.169	.106	1.85	25.20	41.81	60.3
Conocoque Creek near Hogestown.....	470	.385	1.23	1.23	1.74	2.61	6.83	2.88	.764	.545	.447	.366	.262	1.53	20.78	43.02	48.3
Swatara Creek at Harper Tavern.....	333	.158	1.05	1.26	2.30	1.34	8.92	3.82	.535	.529	.271	.300	.163	1.71	23.26	45.24	51.4

Summary of run-off in second-feet per square mile, run-off depth in inches, precipitation, and per cent run-off to precipitation, for the year ending Sept. 30, 1936

Susquehanna River Basin

Susquehanna River Basin

Station	Drainage area Square miles	Run-off in second-feet per square mile												Run-off	Pre- cipitation	Per cent	
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Year	Depth in inches	Depth in inches	Run-off to precipitation
West Conewago Creek near Manchester	510	0.126	0.518	0.843	1.85	1.27	6.76	2.29	0.373	0.751	0.669	0.365	0.112	1.33	18.14	42.45	42.7
Codorus Creek at Spring Grove.....	74.3	.131	.339	.520	1.87	1.88	4.85	2.40	.865	.466	.361	.241	.134	1.15	15.73	42.29	37.2
South Branch of Codorus Creek near York.....	117	.311	.732	.720	2.00	1.76	4.38	2.34	.855	.589	.533	.354	.218	1.23	16.79	42.75	39.3
Conestoga Creek at Lancaster.....	322	.234	1.16	1.03	2.61	1.35	5.51	2.81	.941	.773	.481	.447	.266	1.47	20.06	43.55	46.1
Muddy Creek at Castle Fin.....	133	.648	1.12	.970	2.59	2.32	3.89	2.32	1.36	.955	.684	.495	.365	1.47	20.09	38.79	51.8

Summary of run-off in second-feet per square mile, run-off depth in inches, precipitation, and per cent run-off to precipitation, for the year ending Sept. 30, 1936
Ohio River Basin

Station	Drainage area	Run-off in second-feet per square mile												Run-off	Pre- cipita- tion	Per cent	
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.				Year	Depth in inches	Run-off to precipitation
Allegheny River at Larabee.....	541	0.366	1.16	1.53	0.799	0.880	7.74	3.50	0.808	0.346	0.412	0.161	0.075	1.46	19.91	28.36	70.2
Allegheny River at Franklin.....	5,982	.273	.639	1.46	1.09	1.35	8.33	3.81	1.17	.338	.174	.148	.110	1.56	21.49	35.67	59.9
Allegheny River at Parkers Landing.....	7,671	.242	.624	1.51	1.12	1.34	8.22	3.53	1.14	.344	.168	.172	.124	1.55	21.49	36.49	57.9
Ohio River at Sewickley.....	19,500	.285	.739	1.63	1.07	2.33	7.58	2.94	1.46	.421	.425	.368	.250	1.61	22.36	41.11	54.4
Bronetraw Creek at Youngsville.....	304	.339	.546	2.10	1.07	1.65	8.71	3.75	1.49	.490	.195	.123	.104	1.72	23.40	41.34	56.5
Tionesta Creek at Nebraska.....	481	.222	.744	1.55	1.18	1.63	8.23	2.90	1.22	.356	.218	.170	.111	1.63	22.26	38.59	57.7
Oil Creek at Rouseville.....	300	.251	.510	1.58	1.05	1.43	8.58	3.30	1.31	.318	.225	.187	.134	1.61	21.92	38.67	56.7
French Creek at Carters Corners.....	208	.435	.731	2.13	1.74	2.73	9.38	3.26	.812	.199	.093	.060	.055	1.80	24.58	39.17	52.8
French Creek at Sagers town.....	629	.291	.472	1.86	1.71	2.13	8.22	2.29	.919	.216	.126	.096	.076	1.62	26.07	36.30	60.8
French Creek at Utica.....	1,028	.230	.351	1.57	1.51	1.57	7.01	2.97	.895	.216	.146	.117	.104	1.39	18.98	36.57	51.9
Cussewago Creek near Peaslee.....	166	.082	.198	1.70	1.01	1.32	6.10	2.57	.562	.054	.055	.046	.075	1.15	15.65	36.57	42.8
Sugar Creek at Sugar Creek.....	90.2	.140	.319	1.24	1.13	2.01	6.79	2.92	1.39	.377	.273	.256	.183	1.42	19.34	36.64	52.8
Clarion River near Piney.....	951	.216	.414	1.84	1.27	1.27	9.10	2.76	.938	.376	.169	.217	.102	1.59	21.73	40.46	53.7
Redbank Creek at St. Charles.....	528	.258	.888	2.37	1.57	1.77	9.50	2.14	.491	.206	.131	.157	.112	1.64	22.33	41.36	54.0
Maoning Creek near Dayton.....	321	.211	1.19	2.21	2.41	2.01	8.07	2.26	.405	.265	.136	.411	.218	1.55	22.53	43.34	51.9
Crooked Creek near Ford City.....	280	.171	1.22	1.90	3.06	2.23	6.28	1.48	.198	.262	.094	.284	.191	1.45	19.74	43.22	45.7
Stony Creek at Johnstown.....	467	.349	.771	1.46	1.78	2.65	10.8	3.02	.574	.508	.299	1.15	.689	1.98	26.90	47.93	56.2
Kiskiminetas River at Avonmore.....	1,723	.253	.869	2.07	2.40	3.00	8.85	2.72	.479	.449	.262	1.36	.731	2.05	27.96	46.29	57.9
Blacklick Creek at Blacklick.....	390	.192	.951	2.29	2.73	2.43	9.59	2.43	.464	.337	.167	.691	.453	1.79	24.41	45.92	53.1
Loyalhanna Creek at New Alexandria.....	265	.246	.517	1.42	2.63	3.16	8.58	2.43	.464	.337	.167	.691	.453	1.79	24.41	45.79	54.2
Monongahela River at Charleroi.....	5,213	.255	1.01	1.91	3.36	3.79	6.66	2.91	.599	.194	.824	.288	.091	1.82	24.80	45.79	54.2
South Fork of Tenmile Creek at Jefferson.....	180	.067	.706	1.63	2.04	4.37	5.04	2.31	.127	.025	.162	.165	.028	1.38	18.79	37.80	49.7
Youghiogheny River at Connellsville.....	1,326	.336	.656	1.85	2.77	3.55	8.57	3.17	.796	.450	.619	1.05	.489	2.03	27.58	47.66	49.7
Youghiogheny River at Sutersville.....	1,715	.324	.644	1.75	2.62	3.56	8.60	2.80	.655	.388	.478	.632	.421	1.92	26.25	45.19	58.1
Casselman River at Markleton.....	342	.197	.589	1.58	2.21	2.95	9.61	2.71	.444	.243	.285	.526	.227	1.80	24.76	48.50	50.6
Big Piney Run near Salisbury.....	24.5	.174	.527	1.31	2.81	3.00	8.9	3.51	.412	.111	.133	.185	.075	1.94	26.47	48.14	55.0
Laurel Hill Creek at Ursina.....	121	.202	.654	2.65	2.81	3.78	9.0	3.45	.567	.501	.283	2.12	.660	2.40	26.59	46.60	69.9
Turtle Creek at Trafford.....	54.8	.105	.681	1.63	2.96	3.39	6.46	1.70	.248	.099	.063	.252	.286	1.49	20.26	37.72	53.7
Beaver River at Wampum.....	2,235	.165	.257	1.04	1.20	1.42	4.03	1.52	.485	.185	.196	.237	.235	1.915	12.47	34.44	36.2
Shenango River at Pymatuning Dam.....	167	-.015	.152	1.20	1.21	1.79	4.66	1.60	.457	-.389	-.072	.054	-.281	.862	11.79	35.87	32.9
Shenango River at Sharon.....	608	.050	.188	1.26	1.39	1.55	4.79	1.52	.548	-.018	.072	.217	.044	.993	13.52	37.09	36.5
Sugar Run at Pymatuning Dam.....	9.3	.046	.108	.969	1.01	1.65	4.37	1.79	.221	.048	.046	.194	.048	.469	11.82	28.51	36.4
Little Shenango River at Greenville.....	104	.106	.191	1.05	1.44	1.85	5.19	1.97	.545	.301	.238	.398	.186	1.62	15.32	40.37	37.9
Pymatuning Creek near Orangeville.....	169	.064	.170	1.25	1.58	1.84	4.79	1.69	.551	.053	.103	.398	.139	1.05	14.24	36.43	39.1
Connoquenessing Creek near Hazen.....	356	.187	.531	2.31	2.26	2.04	6.40	1.92	.466	.158	.058	.090	.111	1.36	18.86	33.66	56.0
Slippery Rock Creek at Wurtsburg.....	406	.242	.591	1.98	1.99	1.96	5.25	1.62	.926	.195	.163	.179	.119	1.27	17.30	31.27	55.3

Summary of run-off in second-feet per square mile, run-off depth in inches, precipitation, and per cent run-off to precipitation, for the year ending Sept. 30, 1936
Potomac River Basin

Potomac River Basin

Station	Drainage area Square miles	Run-off in second-feet per square mile												Run-off	Pre- cipita- tion	Per cent	
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Year	Depth in inches	Depth in inches	Run-off to precip- itation
Evitts Creek near Bedford Valley	30.2	0.167	0.387	0.606	0.997	2.26	9.64	2.25	0.530	0.283	0.197	0.138	0.090	1.46	19.95	40.93	48.7
Licking Creek near Sylvan.....	156	.196	.463	.709	1.22	1.72	9.54	2.70	.405	.174	.104	.096	.048	1.46	19.79	41.74	47.4

ELEVATIONS OF MAJOR FLOODS

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ELEVATIONS OF MAJOR FLOODS
DELAWARE BASIN
Delaware River

Miles from initial point		0.0	14.3	17.4	40.0	48.9	62.8	79.9	111.8	120.6
Year	Month	Trenton, N.J. (Calhoun St. gage)	Lambertville, N.J.	Stockton, N.J.	Riegelsville, N.J.	Easton, Pa. Phillipsburg, N.J.	Belvidere, N.J.	Shawnee, Pa.	Milford, Pa.	Port Jervis, N.Y.
1786	October		62.9							
1841	January		66.9			189.2				
1846	March		64.4							
1862	June			75.8						
1869	October									
1895	April		65.0							
1901	December	23.1	65.0							
1902	March	23.6	66.7	76.8						
1903	October	27.3	70.0	81.2	161.2	193.3	255.8	328.2	405.8	438.9
1904	February									441.1
1907	December		61.7		148.3					429.1
1913	March	21.1			150.3					430.6
1914	March	19.8			148.9					432.6
1924	April	19.6	61.0		148.9		245.2			428.0
1924	October	20.3	62.5		149.5					430.3
1933	August	20.4	61.9	72.8	150.3		247.1			430.6
1934	March	22.0 *					244.4			
1935	July	19.5	59.9	71.9	148.5					423.7
1936	January	23.9 *								
1936	March 12-13	23.1	65.2		155.1					430.2
1936	March 18-19	24.4	67.0	80.9	157.7	188.0	252.2	324.2	398.4	433.2

ELEVATIONS OF MAJOR FLOODS
DELAWARE BASIN
Lehigh River

Miles from initial point	0.0	5.8	31.2	34.7	55.7				
Year	Month	Bethlehem (New Street)	Allentown (Hamilton Street)	Lehighton	Mauch Chunk	Tannery			
1786	October	228.9							
1839	January	226.9							
1841	January	233.9							
1862	June	234.2			529.4				
1869	October	233.9							
1894	May	227.9							
1901	December	228.4							
1902	February	226.8	256.5						
1924	October	227.1	248.3		527.1				
1926	November	227.4	250.0 *		527.9				
1933	August	251.7			524.4 *	1054.4			
1935	July	251.6		456.9		1055.1			
1936	March 12	229.9				1055.3			
1936	March 18	228.3	248.2	457.0		1055.0			

* Affected by ice.
 * Affected by a dam failure.
 ♂ About 4,000 ft. downstream from Hamilton Street.

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ELEVATIONS OF MAJOR FLOODS
DELAWARE BASIN

Schuylkill River

Miles from initial point		0.0	7.1	11.6	14.8	26.8	44.0	65.3	87.5	104.1
Year	Month	Philadelphia (Fairmount Dam)	Flat Rock Dam	Conshohocken	Norristown	Phoenixville	Pottstown	Reading	Hamburg	Schuylkill Haven
1757	July							203.5		
1786	October							205.8		
1841	January					90.4		204.3		
1850	July					96.9		207.1		
1850	September							211.5		
1862	June							204.5		
1869	October	22.2	50.6	61.7	68.4	93.8		210.1		
1894	May		48.0		66.1	92.2		205.3		
1902	Feb.-Mar.					93.3		210.0		
1904	March							203.5		
1920	March							206.7		
1924	Sept.-Oct.						137.0	205.0		
1933	August	19.9					132.7	206.0		
1935	July	19.3					132.9	204.4	353.0	503.9
1936	March 12	16.8	44.6	52.0	60.5	86.9		204.0		

ELEVATIONS OF MAJOR FLOODS SUSQUEHANNA BASIN Susquehanna River										
Miles from initial point		0.0	15.8	19.4	25.3	31.2	40.4	50.1	76.3	77.3
Year	Month	Marietta	Middletown	Highspire	Harrisburg	Rockville	Clarks Ferry	Montgomery Ferry	Shamokin Dam	Sunbury
1786	October				312.0					
1846	March				312.0					
1865	March				314.6					
1868	March				310.0					
1886	February				310.8 *					
1889	June	258.3	299.9	303.9	316.8	324.1	355.7	375.3	439.7	441.5
1894	May		299.2		315.4	322.4		375.7		
1901	December				311.2					
1902	March		297.7 *		313.7 *	320.7 *		374.2 *	438.2 *	
1904	March		305.0 *	307.7 *	313.3 *					
1920	March				310.2					437.0
1936	March 13	254.7			311.8					438.5
1936	March 19	260.7	303.6	307.1	320.4	327.5	361.1	379.7	443.9	445.8

* Affected by ice.

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ELEVATIONS OF MAJOR FLOODS
SUSQUEHANNA BASIN

North Branch of Susquehanna River

Miles from initial point		0.0	19.6	35.0	51.8	70.9	93.5	113.9	133.9	192.8
Year	Month	Danville	Cresay	Shickahinny	Wilkes-Barre	West Falls	Mohopany	Wyalusing	Towanda	Binghamton, N.Y.
1784	March				541.9 *					
1786	October				540.9					
1807	April				541.9					
1833	May				539.9					
1865	March	459.1	486.9		545.0				718.8	845.0
1891	January				538.7					
1893	March				540.6 *				709.2	
1895	March				538.9 *				700.4	
1899	January				536.9 *					
1901	December	453.9			538.9					
1902	March	457.9 *	485.1		543.3				718.4	
1904	February	455.6 *			537.6 *				705.8	
1904	March	461.8 *	488.5		542.5 *				707.6	
1910	March	452.1			538.0				712.2	
1913	March	454.2			540.4				714.0	
1914	March	453.8			540.2				714.0	
1916	April	452.9			538.4				712.4	838.1
1920	March	452.0			537.9				711.0	836.0
1925	February	451.4			537.0				712.6	838.8
1929	April	451.4			538.4				713.8	
1935	July	451.1			537.5				715.0	839.3
1936	March 13	454.3			540.7				716.2	838.9
1936	March 18-20	459.1 ø	486.1	520.7	545.0	580.6	632.3	671.7	718.9	844.3

ELEVATIONS OF MAJOR FLOODS SUSQUEHANNA BASIN										
West Branch of Susquehanna River										
Miles from initial point		0.0	8.5.	32.0	48.3	62.7	90.3	124.9	167.5	197.1
Year	Month	Lewisburg	Watson town	Williamsport	Jersey Shore	Lock Haven	Renovo	Karthaue	Clearfield	Mahaffey
1846	March			518.6						
1847	October			514.6						
1851	July			516.6						
1861	September			518.6						
1865	March		467.3	520.6						
1886	January			517.6						
1889	May - June	457.1	473.6	527.0	550.5	564.8	661.3	850.9	1109.0	1266.3
1891	February	456.3	472.1	516.6						
1894	May			524.6	547.7		657.0			
1898	March			515.6			649.4			
1901	December			515.2			647.5			
1902	March			516.2 *			651.0 *			
1904	March			515.6						
1909	May			515.6			649.5			
1913	March			515.0			646.8			
1916	March			515.0			649.9			
1916	June			515.6			648.7			
1918	February			516.0			648.5			
1919	May			515.4			647.7			
1920	March			515.0			649.0			
1923	March			516.2			647.1			
1936	March 11-12			518.2			649.6			
1936	March 18-19	459.3	475.4	528.1	551.1	567.3	663.4	853.4	1110.8	1268.9

* Affected by ice.
ø Affected by backwater from West Branch.

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ELEVATIONS OF MAJOR FLOODS
SUSQUEHANNA BASIN

Juniata River

Miles from initial point		0.0	34.6	73.0						
Year	Month	Newport	Lewistown	Mapleton	Frankstown Br. - Huntingdon (4th St.)	Frankstown Br. - Alexandria	Frankstown Br. - Williamsburg	Little Juniata R. Tyrone	Raystown Br. - Sarton	Raystown Br. - Everett
1810	November	391.2			613.7					
1846	March	383.2								
1847	October	391.7								
1889	June	399.1	486.7	597.4	617.7	705.9	850.9	892.7	817.7	1012.9
1894	May	394.2			612.4					
1901	December	385.2			609.9					
1902	March	388.5			608.3					
1907	March	386.7			609.2					
1908	March	384.5			609.2					
1916	June	383.2			610.2					
1920	March	384.1 *			607.0					
1936	February	386.6 *			606.3		843.1		805.6	
1936	March 12	383.6			619.3	707.2	850.4	896.5	819.3	1019.3
1936	March 18-19	397.4	485.2	596.0						

ELEVATIONS OF MAJOR FLOODS
OHIO BASIN

Allegheny River

Miles from initial point	0.0	16.40	55.10	96.20					
Year	Month	Freeport	Kittanning	Parkers Landing	Franklin	Warren	Red House, N.Y.	Larabee	
1806	April		794.4						
1832	February		793.4						
1865	March	767.0	794.0	874.1	981.3	1188.4			
1873	December		791.4			1186.7			
1881	June	764.4	792.4						
1883	February	765.5	793.4						
1884	February	765.0	792.4			1178.4			
1886	February	755.7	791.0			1183.0			
1891	February	767.7	791.0			1184.5			
1902	March	765.0	789.6			1184.5			
1905	March	767.0	793.4			1182.1			
1913	January	763.4	789.8	871.8	980.8	1186.2			
1913	March	767.2	794.8		976.9	1184.8	1331.8	1438.4 *	
1920	March	762.3	790.8		971.1	1184.0		1438.8	
1925	February	758.0	784.5		982.3 *			1441.0	
1926	February				971.8				
1927	November		786.4		975.5	1186.0	1332.4		
1927	December				973.3	1182.3	1330.7		
1929	January						1333.6 *		
1934	March			873.0 *					
1935	February			865.7					
1936	March 12			862.3	971.7			1437.0	
1936	March 17-18	776.0	793.6	863.1	968.1			1438.8	
1936	March 28			864.4	975.3		1331.6	1436.1	

* Affected by ice.

146 ELEVATIONS OF MAJOR FLOODS OHIO BASIN Kiskiminetas River and its important tributaries									
Miles from initial point		0.0	11.63	16.05	38.00	58.90	70.10		
Year	Month	Kiskiminetas R. Vandergrift	Kiskiminetas R. Avonmore	Kiskiminetas R. Saltsburg	Conemaugh R. Blairsville	Conemaugh R. Seward	Stony Cr. Johnstown a/		
1884	February		829.7						
1888	August		837.4						
1889	June		835.4				1182.3		
1891	February		836.0						
1902	March		832.0						
1906	June		824.7	836.4			1164.8		
1907	March		839.4	847.4			1165.8		
1908	February		828.1	837.4			1161.2		
1908	March		836.4	844.4			1164.5		
1910	February		829.3						
1912	March		833.6	842.4					
1912	September		827.9	838.4					
1913	January		827.8	838.6					
1917	January		829.6	838.6					
1917	March		824.3	835.2			1168.0		
1918	February		827.6						
1921	November	791.6	830.3	841.1			1167.7		
1924	March	790.7	829.6				1170.9		
1924	May		827.5	837.4			1168.2		
1927	October	792.1	850.7				1167.2		
1928	May		825.9				1167.2		
1930	February	789.6	828.9						
1933	March		828.6						
1936	March 18	808.2	852.8	859.9	948.3	1098.8	1184.3		

ELEVATIONS OF MAJOR FLOODS OHIO BASIN Youghiogheny River									
Miles from initial point		0.0	4.22	29.47	47.70	57.87			
Year	Month	Sutersville	West Newton	Connellsville	Chicoryle	Confluence			
1860	April			876.6		1325.9			
1888	August			877.9		1321.2			
1891	February		759.3	874.8					
1896	July		756.9	875.1					
1897	February		762.7	876.8					
1902	February		762.7	875.9					
1904	March		757.7	873.8					
1907	March		768.9	878.5		1327.5			
1908	February		758.2	874.5		1318.9			
1912	March		769.6 *	877.4		1320.9			
1913	January		757.4	873.6		1318.9			
1916	March	752.1	758.2	875.1		1319.4			
1917	January	753.6	760.0	875.3 *		1324.7			
1918	February	751.9	756.9 *	874.1		1322.5			
1924	March	761.4	766.3	879.5	1211.9	1329.3			
1928	May	751.4	757.7	873.8		1319.9			
1933	March	754.2	759.1	875.0		1320.9			
1936	March 12	743.7	749.1	868.6	1204.6				
1936	March 18	763.8	768.7	880.4	1212.3	1328.6			

* Affected by ice.
a/ Elevations for 1906-1908 are at Franklin Street; for other years they are for Poplar Street, about 3500 feet farther upstream.

147 OHIO RIVER FLOOD HEIGHTS AT PITTSBURGH									
Year	Day of month	Stage		Year	Day of month	Stage			
1762	January 9	39.2		1899	March 6	25.2			
1763	March 9	41.1		1900	November 27	30.9			
1806	April 10	37.1		1901	April 7	25.3			
1810	November 9	35.2		1901	April 21	30.7			
1813	January --	32.2		1901	December 16	29.0			
1816	February --	36.2		1902	March 1	35.6			
1832	February 10	38.2		1903	February 5	27.2			
1840	February 1	30.0		1903	March 1	32.1			
1846	March 15	28.2		1904	January 23	33.2			
1847	February 2	30.1		1904	March 4	30.1			
1847	December 12	27.2		1904	March 8	26.4			
1848	December 22	26.2		1905	March 22	32.2			
1851	September 20	34.1		1905	December 4	26.7			
1852	April 6	28.2		1907	January 20	26.5			
1852	April 19	35.1		1907	March 15	38.7			
1858	May 27	29.2		1907	March 20	25.6			
1859	April 28	25.2		1908	February 16	33.9			
1860	April 12	32.9		1908	March 20	30.5			
1860	November 4	25.2		1909	February 25	25.5			
1861	September 29	34.2		1909	May 1	25.4			
1862	January 21	33.2		1910	January 19	26.0			
1862	April 22	28.6		1910	March 1	25.2			
1865	March 4	27.7		1911	January 15	27.0			
1865	March 18	34.6		1911	January 31	28.4			
1867	February 15	25.2		1912	March 22	31.3			
1867	March 13	26.7		1913	January 9	34.5			
1868	March 18	25.2		1913	January 12	29.5			
1873	December 14	28.9		1913	March 28	33.6			
1874	January 8	25.4		1913	November 17	25.4			
1876	September 19	28.2		1915	February 3	31.6			
1877	January 17	27.8		1915	December 19	25.8			
1878	December 11	27.7		1917	January 23	28.4			
1881	February 11	26.4		1917	March 13	26.3			
1881	June 10	30.3		1918	February 21	30.3			
1883	February 5	28.0		1918	March 15	29.1			
1883	February 8	31.2		1919	January 3	26.0			
1884	February 6	36.5		1920	March 13	28.3			
1885	January 17	26.2		1921	November 29	28.6			
1886	April 7	26.0		1924	January 4	30.6			
1887	February 12	25.2		1924	March 30	32.4			
1887	February 27	25.2		1924	May 13	29.6			
1888	July 11	25.2		1927	January 23	29.7			
1888	August 22	29.2		1927	December 14	30.4			
1889	June 1	27.2		1927	February 27	25.3			
1890	March 23	27.5		1929	February 16	29.6			
1890	May 24	25.2		1933	March 6	25.8			
1891	January 3	26.4		1934	March 13	26.3			
1891	February 18	34.5		1935	February 28	29.2			
1892	January 15	26.2		1936	March 13	25.8			
1893	February 8	27.2		1936	March 18	46.0			
1893	February 11	25.2		1936	March 26	30.6			
1894	May 22	26.4		1936	April 7	25.5			
1895	January 8	29.0		1937	January 19	28.1			
1896	July 26	26.2		1937	January 23	32.9			
1897	February 24	32.7		1937	January 26	34.5			
1898	March 24	32.1		1937	April 27	35.1			

Gage heights referred to or observed at the Point Bridge gage.
All heights have been adjusted to the present gage datum.

Zero of gage is 694.00 feet above mean sea level. Flood stage is 25 feet.

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